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TEACHERS' EDITION.

THE

Child's Book OF LANGUAGE

Graded Lessons and Blanks for the Natural Development of Language.

INTRODUCTORY TO LETTERS AND LESSONS.

By J. H. STICKNEY,

Late Superintendent Boston Training School; and Head Assistant Boston Normal School.

D. APPLETON & CO.

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THE

Language Pen and Picture Series,

By J. H. STICKNEY,

EMBRACES

THE CHILD'S BOOK OF LANGUAGE,

IN FOUR NUMBERS,

For use in Primary Schools, based upon a course of conversational picture-lessons, the results of which are to be written in the pages of the book;

AND

LETTERS AND LESSONS IN LANGUAGE,

IN TWO SERIES OF FOUR NUMBERS EACH,

Which continues the course in Grammar Schools, creating occasion for the natural use of language forms, without anticipating the study of grammar, before it can be profitably taken.

The Series combines the advantages of both oral and text-book instruction.

Words are treated as concrete and pictorial terms, *illustration* taking for the most part the place commonly given to *definition.*

The pupil is taught by what he does, making steps of his own, which, being expressed in written form, remain to be retraced at will.

The following are apparent distinctive features:

1. Best because most natural language culture.
2. Easy grading for composition.
3. Oral instruction in permanent form.
4. A practical course in writing.

THE CHILD'S BOOK OF LANGUAGE.

IN FOUR NUMBERS.

I. STORIES IN PICTURES.
II. STUDIES IN ANIMALS.
III. STUDIES IN PLANTS.
IV. STUDIES IN WORDS.

TEACHERS' EDITION.

Principles and Methods.

Oral Instruction, always the *ideal*, is in language-culture the *only* means of successful teaching, since it alone makes place for spontaneous expression.

But oral instruction means more than the pursuance of a *book plan minus the book*, however good both book and plans may be.

It is the intelligent conversational method of bringing to expression the previous knowledge of the learner, and making it *a basis for added inference, demonstration*, or *fact.*

Its strength lies in the opportunity given the learner to come to the apprehension of knowledge, step by step, with the delight of a *discoverer*, and the habit it induces of correct investigation.

The weakness, if there be one, is in the absence of a record, *outside the memory*, for the better preservation of the knowledge gained. Manuscript records, however, meet this want for the time, and later studies, presenting the same facts in deductive or scientific form in books, provide fully against real loss.

Both science and experience have shown that truth that has once clearly commended itself in a living way to the intelligence is not lost, if *apparently forgotten.*

If what has been said of oral teaching be true, it plainly follows that details of method *can not be given in advance*, or if given can not be

closely followed. Each lesson is the joint product of the work of the teacher *and the class;* its limitations they *jointly* share; and the success of the teaching is to be measured by the *capabilities invoked in the class.*

Yet is there a kind of Social Science in this as in other fields of life, by which what might not be predicted of an *individual* may be expected of a school in the *aggregate.* All teachers know this, and act upon it in preparing lessons, but till foresight is justified by experience it should be only tentative. Acknowledged mistakes are better than forced ways.

An unclouded social atmosphere in the schoolroom, absolute naturalness, and a correct estimate of desired and obtainable results, are constant factors in success of the highest order.

Differences in natural aptitude for teaching show most where work is so living. The *quick instinct that recognizes the movement of another's mind* and meets it where it halts, is always the better part of a teacher's gift and power, and in oral lessons is *invaluable.* But one is not likely to be found in a schoolroom at all, if entirely wanting in power to win the confidence of children and enter into their lives, and both parable and precedent teach us not to despise the one talent with which we may begin.

It is not uncommon to observe in teachers great magnetic power while *doing their part* of the work, without corresponding life while gathering the responses of *the children.* The meagerness of results is then falsely attributed to dullness on the part of pupils, and the standard of lessons is lowered.

Others *overdo the matter of enthusiasm,* creating an unnatural stimulus and inducing a kind of *smartness* that is fatal to results of a high character.

The happy mean is reached when the teacher is *genuinely* interested in all healthy signs of progress, and expresses pleasure in a natural way, not as a means of effecting a purpose, but as a free response to the child.

Since the first edition of this series was issued, the author has been asked if in a familiar way items of personal experience in language-training might not be given to aid others in their first trial of the books.

Such aid is most gladly given to any extent short of antagonizing the very aim of the series, which, as is stated in the definition of oral instruction, is to induce teachers themselves to make plans based upon their best

beliefs, so following *ideas* rather than *models.* The following chapter gives a single plan for appealing to the language faculty.

Beginnings of Language-Culture.

With little children whose previous habit had been in the line of rote-recitation, and whose idea of a school was stilted and unnatural, I have sometimes broken through the reserve by giving ten minutes at the opening of each session to familiar talk.

Some question like "What would you do with a five-cent piece?" has served for a key to unlock the closed gates. The object being conversation, I took no care to hold thought to a subject. It was sometimes difficult to find *a law of association* to account for the vagarious contributions, which were subject to no restrictions if they were *respectful.*

After a few days, concentration to a single idea came of itself, without violence to individual freedom, each talk being longer or shorter, within prescribed limits, according to the resources of the children. Often the introduction itself was made by a child, out of some remembrance of a preceding talk.

If *amusing*, the children's remarks were laughed at a moment; but some one could always be found who was ready with a *new thought*, to which the class turned readily:

If *obscure*, the thought was *sought out by questions* and a new expression secured;

If valuable, for any reason, a remark was shown to be so by *my recognition of it*, and by something I made it a point to *add;*

If *trivial* or *rude*, a saying was *ignored* and allowed to sink without creating a ripple in our waters; and nothing so effectually silenced impertinence or coarseness, that was only *half* conscious, as *absolute non-recognition.*

Under the influence of this social stimulus shy children waxed confidential, and a host of home and outside matters, entirely irrelevant except under this broad law of suggestion, were poured out like pent-up waters. When *the slow*, *the shy*, *the unsocial*, and *the uninteresting* had found their places in our body politic, and all of us had come to feel a common interest, this pioneer work dropped or was merged in specific lessons having an added motive.

Experience taught me the truth of the statement of the rhetoricians, that *narration is easier than description.* In obedience to it, if animals were chosen for language-work, we dwelt first upon their *ways;* if people, upon *some incident of their lives.*

In the Language Series I have placed the Stories in Pictures first, as giving widest range. One or two lessons wrought out in detail will show the *spirit* of all. Perhaps the less stress that is laid upon *a* way may result in most and best *ways.*

The Notes on Animals and Plants are purposely given in language too difficult for children. Description is to be, so far as it is at all, wrought out *in the minds of the children themselves.* I often found it difficult, in the midst of teaching, to avail myself of the best books on natural history, and, when I had access to them, made notes in condensed form for future reference. These I have given for the help of others. I earnestly hope they will *never be taught to children* as having value in themselves. In so far as the teacher needs to guide the thoughts of her class by question and suggestion, she may in turn be helped by these fragments of observation by those whose opportunities have been wider than her own. They must, however, be assimilated to her own life before she can make them living in her teaching.

The fourth book represents great possibilities in the discrimination of *words.* I would recommend to teachers that they do what commends itself at first look, expecting each new time of teaching to reveal the *added opportunities.* A *rigid* plan would defeat itself.

STORIES IN PICTURES.

Introduction to Number One.

The story-making power needs little beyond the opportunity for its exercise and the interested response that childhood always claims.

Since, however, time is so great a desideratum in our school exercises, the teacher must play an important part in making the work of forty come into the time for one.

The pictures serve to gather to a single point or center the thoughts of all, and give a kind of unity to their action. Questions, happy suggestions, and the like, act as stimulants to thoughts and fancies. The expression of one thought opens the way to another and another, till one is often troubled to know what to do with all that is brought forward to make part of the pleasing whole that children expect.

They are, however, easily satisfied, so that, while demanding a teacher's highest gifts, they are gratified with the least exercise of them, and look upon her work in *setting their gems* as little less than that of a goddess.

Each picture may have a number of stories equally applicable, and in all respects equally good. The teacher may delay the writing of the story till a number have been orally wrought, and then let each child choose for his own writing; or, she may go through the book with the gathering of a single story to each page, and afterward review it, either with a fresh copy of the book, or with the help of slates, requiring a different story.

The book contains twenty pictures, as the work of a half year, allowing in most schools a week to a page. Less work would be more difficult, by reason of too long intervals between the lessons and a consequent loss of interest and power; and, if more is undertaken, it had better be in the line of Studies in Animals or Plants, which, with older children, may serve for alternate days or weeks.

A single lesson, the story of Robbie, shows the work of one teacher in her one class. It may not be the best for any other, but it shows a possible method. It is not thought that a full sketching of plans would be desirable.

Trying to Think and Write.

Sue has been playing a long time with Amy her doll. Just now she said to her, "Amy, you may sit upon the bureau, leaning against mother's work-box, and I will push my papa's arm-chair as near as I can and sit by you".

She has her slate, and wishes she could think of something to write. Why doesn't she tell us about Amy?

It does not look as if she were trying very hard, for she has no pencil in her hand, and only her own name upon the slate.

Robbie.. garden..
flowers.. roses.. mamma
I will.. new spade..
big hat.. hot day.. hard
work.. thick grass..
busy.. so tired.. asleep..
forgot.. next time

Tell the story of Robbie.

Sketch of lesson with children of seven years.

Introduction: "Look at the picture, so as to have it in your minds. Presently we will talk about it; then I shall want you to look at *me!*

"Now let us read the words at the left of the page." This is done, and we decide that the words and picture belong to *the same story*, and tell *which of them* show this.

. . . . . .

"Willie, what do *you* see in the picture?"

"A little boy."

Who is he?——"Robbie."

We pause a moment, till I have all looking to me to see what is coming next, then I ask again:

"Who *is* he?"

If no reply is given, I tell the children that, since none of them want him, I shall adopt him as *my little nephew!* I afterward waive my right as they tell me—

"He is my little brother." "He is a friend of mine." "He is my cousin."

"How *old* is he?"

We decide that he is not far from four, but, as there have been differences of opinion, agree to say that he is *about*, *almost*, *nearly*, or *not quite* four years old. I call upon different ones to tell what we have learned, and accept the following forms:

1. My little cousin Robbie is almost four years old.

2. I have a little brother. His name is Robbie. He is four years old.

3. Robbie is my little friend. He is not quite four years old.

This ends the lesson as a conversation. The children write the result on their slates, and afterward in the books.

. . . . . .

Next time: We look again at the picture, read the words, and tell what is *mentioned that is not in the picture.*

"There is no garden"—"no flowers"—"no mamma."

There is doubt about the "I will," but we *think we see it in the little face*, and here we make a pause.

Bessie... Fido... basket... bare feet... berries... sell... buy... shoes... heavy... pick... home... fence... rest... bridge... loves... little mistress... sun-bonnet... parasol

What about Bessie?

THE ROBBIE STORY CONTINUED.

Since "garden," "flowers," and "mamma," are in the story, we conclude that R. is trying to *make* a garden, that he wants some roses for his mamma, and thinks this is the way to get them.

How happened he to think of it *to-day?*

Perhaps he heard her *wish* for some.

He is a very little boy, I tell them, and I think it quite possible that he does not know *exactly* what he means by roses, or what is needful in raising them.

"Do you begin to like little R.? *I do.* Look at his face and tell me about him."

He is good—loving—kind—generous—a dear little boy—nice, etc. We select *kind* and *loving*, and gather all that we have learned at *this time* to add to our story, but pause to ask *when it was* that he did this, and, after the various answers, settle upon "*one day.*"

1. He is a kind, loving little boy. One day he heard his mamma say she liked flowers. He put on his big hat, and took his new spade. "I will make a garden," he said, "and get her some roses."

2. Robbie is very kind and loving. He heard his mamma say that she would like some flowers. "I will make a garden," he said, "and plant some roses for you."

I teach them how to write the quotations, and write both forms on the board.

The third lesson tells that it was a *hot day*, that Robbie was very *busy*, but that the *thick grass* made *hard work.*

And the fourth completes the story by telling what happened. His mother found him under the tree, close by the wall, *asleep.* He was *so tired*, he said, and he forgot where his garden was, but would plant some roses for her the *next time* she wanted them. Or, perhaps, she told him that next time he must ask his older brother to help him and teach him how to make a garden.

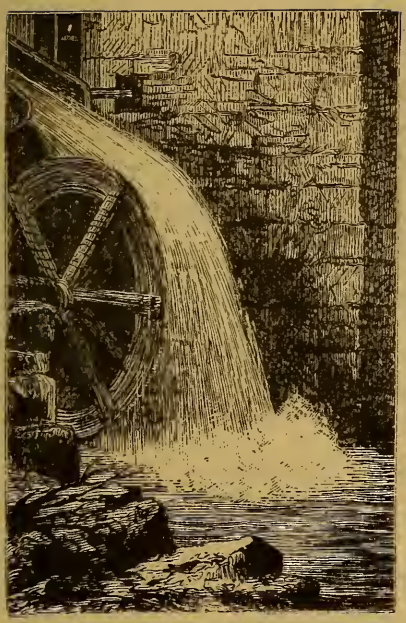
1. Who are these children?
2. What has the little boy said?
3. What is the little girl replying?
4. Finish the story.

The Story.

1. One morning — and his little brother —
2. A pair of robins built a nest in a —
3. "Look, Bennie," said James to his brother.

Tell one of the stories.

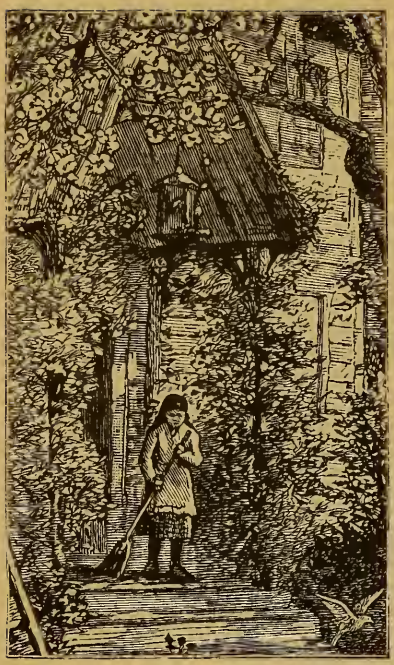
The Nest.



Where does the water come from? How comes the stream to be so narrow? How does turning a wheel help to do work?

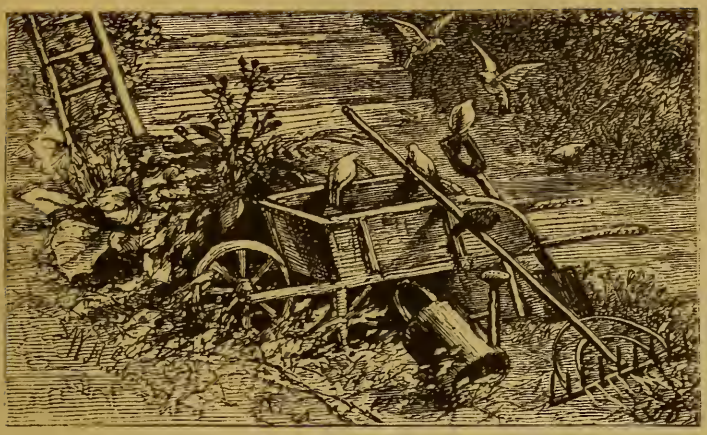
Does the water run all the time?

The Mill.



The probable time of day. Who the girl is. What she does for work; what for play. Whether the pigeon is afraid. Ask and answer the questions.

A Home.



Tell the names of the things you see and their use.

Make a story of the one who uses them. The girl sweeping is his sister.

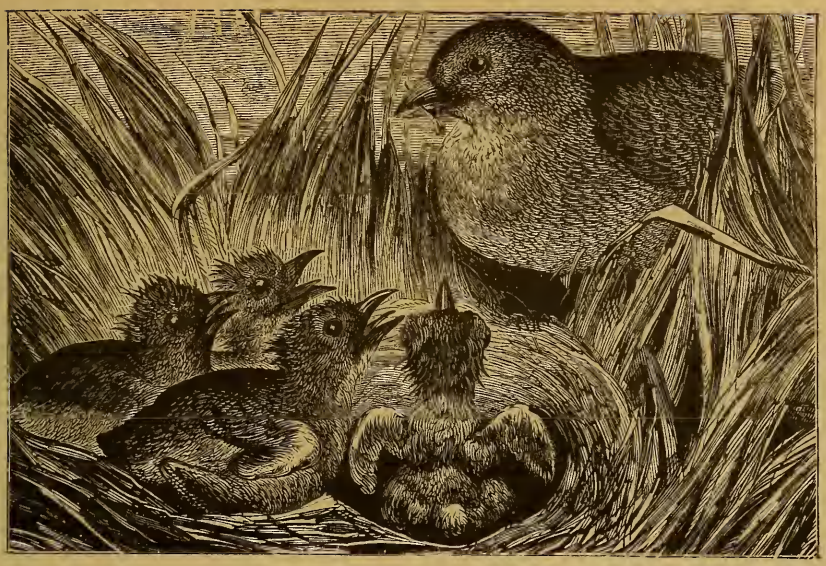
Summer Work.

Count the children here. Do you know the play? What do they say? Tell about the school and school-house.

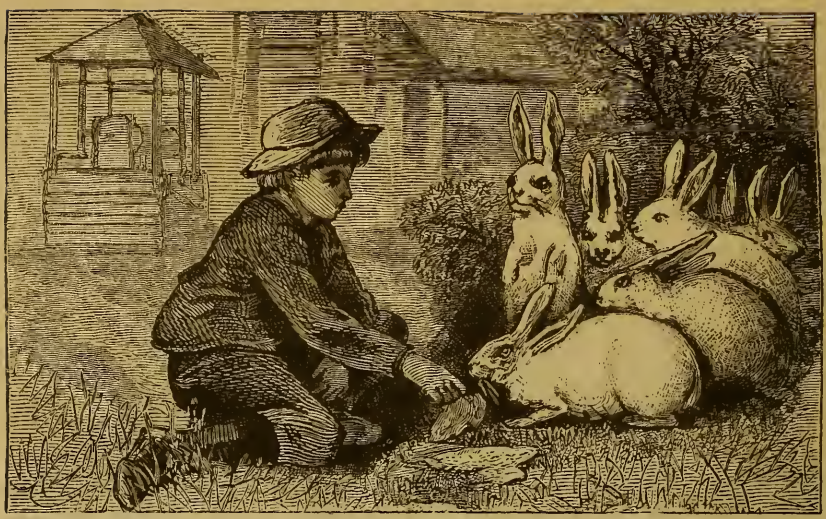
A District School.

Does kitty like this kind of play?

Rover is a better playfellow.



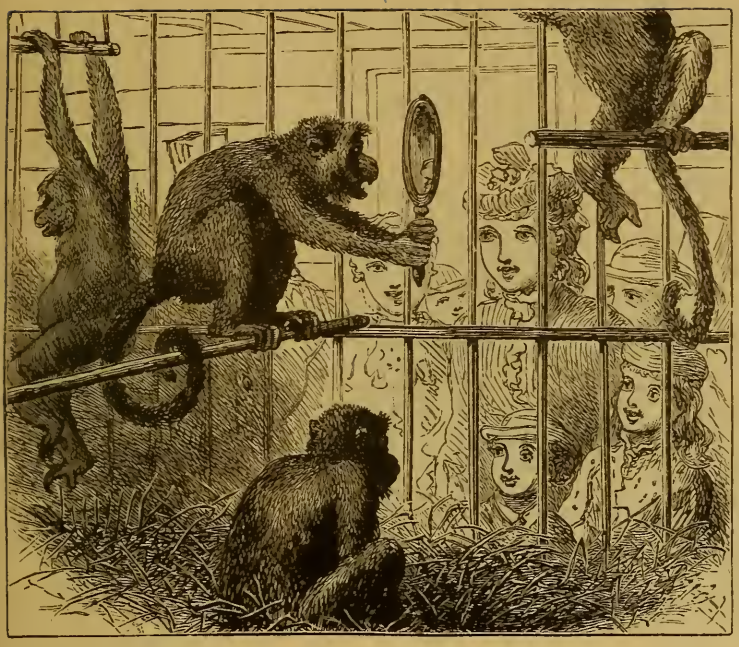
Tell all that this mother has to do.



What would you do if you had them?

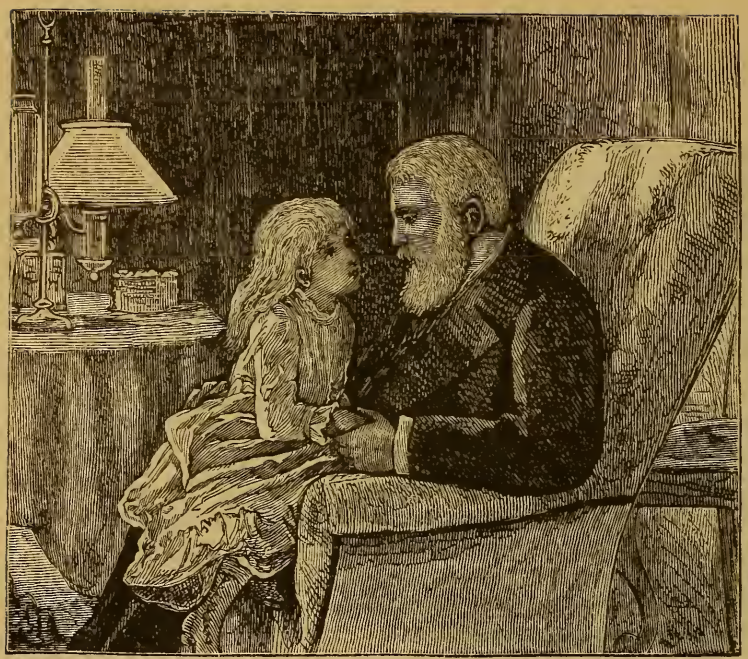
A good story of coasting needs an accident.

Write what these two are saying.



Tell what these monkeys are doing.

What have you seen monkeys do?



What is going on here?

And what will happen when it is over?

Alice's talk to the cat, and kitty's thoughts about Alice.

The class divide—half agreeing to be Alice, and half to be kitty. The teacher will try to be each in turn. Which shall speak first?

The lesson may be written as a dialogue.

Questions for page 19:

What time of day is it? Are the sparrows *hungry?* Are they *afraid?* Perhaps they can not decide to which of them it belongs. What would they say if they could talk?

What will the beetle do if he can get a chance?

Plans for page 20:

The *kind* of bird? its name? where it lives? who owns and cares for it? what it likes to eat? whether it is safe to leave the cage-door open? Does he sing? Does he know his name? What interesting ways has he?

Or, suppose this little girl to be a visitor, and not to have a right to open the cage. Tell what happened, and who was very greatly grieved.

Wouldn't it be funny if, after all, neither of them should get it?

Write the story of this bird.

THE STUDY OF ANIMALS.

Introduction to Number Two.

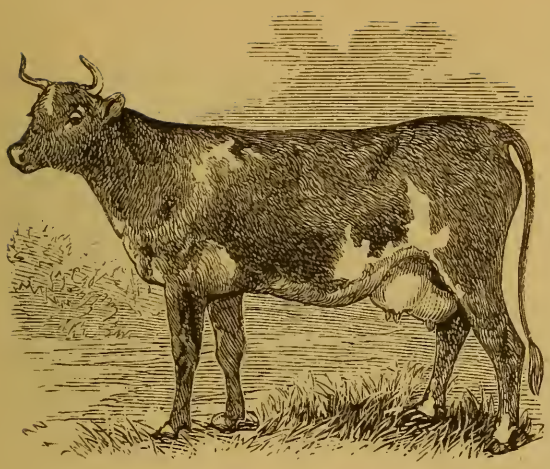
METHOD in animal lessons must vary with the general aptitudes of teachers and children. Among many plans it is difficult to choose ; only, there must be a plan both for each lesson and for the course—general enough to admit of variety, and continuous enough to prevent the children from always waiting for the teacher to take the lead.

There are advantages, especially with *young* pupils, in short lessons answering to a single thought. For example : The horns and hoofs of the cow may be sufficient for a ten minutes' talk and a gathered statement. The way she eats, gathering the grass with her tongue and breaking it with a twist, while the horse cuts it with his teeth, and the camel takes hold first with the *lips*, and the added fact of *chewing the cud*, may serve for a second. With older children, other animals, of which the one in the lesson is a *type*, may be studied, though the blanks are only sufficient for writing about one.

The teacher who is heartily interested will constantly grow in the knowledge of animals, and will feel a desire to bring the class into sympathy with them, by giving the thoughts of others about them in *poems*, *songs*, and *stories*, as well as in doing her special work of teaching how to observe their forms and ways.

Children like *to tell stories* when relieved from their first embarrassment, and in no way can the teacher learn the language-needs of her class so well as by studying them when intense interest has thrown them off their guard, so that they fall into home ways.

Most teachers lose this, their best opportunity, by suppressing familiar talk rather than training it into pleasing expression. The more forward and ready, who need the practice least, are the ones who commonly get most of it, and real power and wit wait for a fluency that can only be gained through encouragement and practice.



How do you know the cow? How do you distinguish her from the horse?—the sheep?—the deer?

Cows do no work: why is it that so many people keep them?

Describe a summer day in the life of a cow.

The ox is of the same family: how does his life differ from hers?

The Cow.

TEACHERS' NOTES.

Cows, in common with other ruminants, have two toes, covered with *horny hoofs*, so fitted as to look like a single round hoof, *cut* in the middle. This and the habit of *chewing the cud* are their special peculiarities.

For chewing the cud they have a peculiar stomach, one part of which takes the food and lets it soak till it is soft; then at the animal's leisure it is brought back in little balls, to be chewed and made fit for the work of the real stomach.

The cow is known by her *curved*, *hollow horns*, *deep neck* (which is made to seem deeper by the hanging *dewlap*), *stout*, *clumsy body*, and *strong legs*. Along the back there is a *straight ridge*, raised in some at the thighs to a low hump. The tail is *long*, with a *tuft of hair* at the end.

The *ears are large*, and can be turned to catch sound, and the *eyes far apart*, commanding a wide range.

The cow is valued for her milk. Her flesh is a staple article of food; and the hide, hair, horns, bones, and hoofs have well-known uses.

METHOD.

In general, let there be but little appearance of method, while yet the *direction* of thought is given. A few leading questions will indicate a plan. Much may be made of the question, "How do you *know* this animal?" One answers, "By its horns." "Yes, but the deer has them, too." This opens the way for describing those of both.

2. "If she were to *lose* her horns, would you mistake her for a horse?" The line of the back, the clumsy body, and other parts, will follow this lead. "Suppose you saw footprints of the horse and cow in the street, how should you know them both?"

3. Again, "How else do you *know* the cow?" "Suppose some one showed you the hide, just as it was taken off, could you tell what it was?"

If the sentences are faulty, do not talk of them *as sentences*, but as thoughts or facts stated. When the time for writing comes, let it be preceded by oral answers to very explicit questions; and, if there is still doubt about the result, let it be first a slate exercise.

If you were going to select a horse for your own, what kind of a one would you have?

Suppose your horse were lost or stolen, describe him so that he might be returned.

Tell some of the ways by which the playful, springing colt is trained into a useful, obedient horse, without loss of spirit.

The Horse.

TEACHERS' NOTES.

The characteristics of the horse are the noble and graceful carriage of the *arched neck*, with its line of *long flowing mane*, and the tapering head, with *full eyes*, *large sensitive nostrils*, and *upright pointed ears* turning to catch sounds.

There is an opening between the canine teeth and the molars on each side, into which the bit of the bridle is fitted to govern the direction in driving.

The *body* is *long* and *symmetrical*, *stout* in those species where strength is required, but in no case clumsy.

The *slender*, *straight*, *small-jointed legs* are of equal length, making the body horizontal. The droop in the line of the back just behind the shoulders makes riding on the back possible and comfortable.

The feet are *small*, ending in a *single* toe, inclosed in a horny *hoof* or shoe.

The covering is a *thick skin* thinly covered with *smooth hair*. The *tail is long and flowing.*

The remarkable *memory* of the horse, united with his great *intelligence*, makes almost any item of *education* possible.

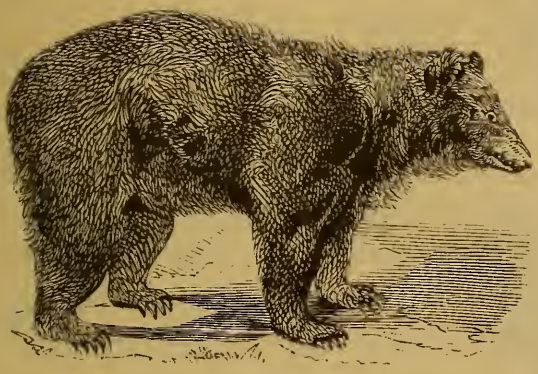
METHOD.

Questioning upon the choice of a horse will call into expression what the children know of the *colors* common among horses. Where the mane and tail differ from the general color, let it be stated; e. g., "A dark-red horse usually has a black mane and tail."

The wish for *great speed* will make prominent the slender body and long legs. *Beauty* in a horse will call attention to all the points of form. The teacher is in no danger of getting beyond the power of her class if all that she tells them grows out of some point of their own.

Ways of driving suggest the different *motions* of the horse in traveling—ambling or pacing, cantering or galloping, and the more general trot and walk of ordinary driving.

Let some feats of trained horses be told, and use them to develop the expression of *docility*, *native intelligence*, and *capability for education.* The sentences may begin, "I should like to own," etc., or, "I have a . . . . . ."



This must be the kind of animal that first taught boys to climb trees! Describe his manner of doing it.

How could you distinguish him from a great black dog? What habits of his make him a terror? Is he really so dangerous?

What interesting things are bears trained to do in menageries?

The Black Bear.

TEACHERS' NOTES.

The bear is characterized first by being plantigrade, i. e., *walking upon the sole of the foot.* It is this that gives him his *awkward, shuffling gait.* It also helps him to rest upon his haunches and *stand erect*—one of his common attitudes.

He is an *excellent swimmer*, and in warm weather delights in the water.

It is said also that he revels in the fury of a storm, and, when other animals are overcome by it, takes advantage of the opportunity it gives to secure them easily for food. The black bear does not seem to delight in killing his prey. He does not do it in a "direct, business-like way, as the lion does," but *hugs it to death*, or tears it.

He is fond of honey, sweet roots, green wheat and corn, apples, etc.

He rarely attacks man unless in great hunger; but the farmer has need to secure his hogs and calves if the bear has once known the taste of them.

The flesh of the bear is delicate, resembling pork. The covering is a smooth fur, much in demand in commerce.

METHOD.

So much is known of the bear that it is quite probable that the teacher's work will be mainly the asking of questions, and helping the children to recast their answers for more connected expression than is common in eager talking. *Stilted sentences*, that miss the freshness and life of the thought, must, however, be carefully avoided.

His cautious climbing and coming down the tree backward, like a boy, if told, will not be forgotten.

Reference to his caution will give credence to the fact that a person may escape him by climbing a tree too small around and too light for him. Tell the children that farmers' wives and daughters will go out and frighten away a bear that is prowling around the barnyard, with little more fear than we might feel if a strange cow intruded upon our premises; yet at times they are really dangerous.

The winter life of the bear is well known; and the care the mother-bear takes of her young is a lesson in itself of self-denial and loving devotion.

What would you do if this little creature were yours?

What would he do that would interest you? Suppose, instead, that he had a nest in a hickory or oak tree near by, and you could watch him without taking away his freedom, what other things would you see?

The Squirrel.

TEACHERS' NOTES.

The structural peculiarities are shown in the *four front teeth*, two above and two below, with *chisel edges* meeting at an angle in front of the line of the jaws.

The hard enamel only covers the front, and the softer material of the back wears away faster and so leaves always a sharp edge. Constant growth supplies the waste of wearing, and keeps them strong. The movement of the jaw is simply forward and backward (besides the opening and shutting), so that the hardest substances are easily reduced to powder.

They are *timid* animals, and small in size. The *hinder parts* of the body are *strong*, and the *fore parts small* and *delicate*. In most species there is great freedom of the fore limbs.

The longer hind legs make their movements more like *leaping* and *hopping* than walking. The varieties are the tree and ground or burrowing squirrels, and the colors are red, red and white, striped, and gray. The tree-squirrels have more *bushy tails* than the others, and use them as rudders in long leaps on trees.

METHOD.

The ways of these sprightly little animals make them favorites with children, and they will tell where they live, and how; how they manage when the nuts and fruits are gone; how they frolic and chase each other about; and how their marvelous activity is balanced by their sleeping in dull weather, as well as nights and much of the cold season.

Let the children tell orally, that they may be prepared for the writing, what squirrels do in a cage, and what with the freedom of the trees and ground.

The variety they like in food, while feeding mainly on nuts, belongs to the knowing how to take care of those that are kept in cages.

Let their quick hearing and sight direct attention to the large ears and full eyes, and the need of these to an animal who is in constant danger from foes on all sides.

Ask the children what they would *like* to put into their books, and teach them the poem beginning,

"Look! there's the squirrel perched aloft—
That active little rover."

Is this fellow one of your friends?

What are some of his interesting qualities that *you* might adopt for yourself?

What makes him troublesome, and what harm can he do?

Tell what the cat thinks of him, and his opinion of the cat.

The Brown Rat.

TEACHERS' NOTES.

The leading features of this family are:

The *pointed head*, with *sharp teeth*, the opposite ones making an angle with each other, *long whiskers* or *feelers*, *large black eyes*, and *great hood-shaped ears;*

A *stout neck*, chest and shoulders small, but *thighs strong* (called haunches);

Legs and feet slight for so heavy a body, with *sharp claws;*

Covering of *short*, *smooth fur*, of grayish brown or black color, and *long tail.*

For the rest, the rat is best described as the embodiment of a voracious appetite.

He has gone the world over with man; traced originally to the East, he has taken passage everywhere man has gone. He is a terrible burrower, sometimes undermining dams. He breeds very fast, and so multiplies rapidly. The brown rat expels the black rat and the mouse wherever it makes a home.

The harvest mouse of England, smallest and most beautiful of animals, builds an exquisitely constructed, ball-like nest above the ground in corn-rows, and burrows in the ground in winter.

METHOD.

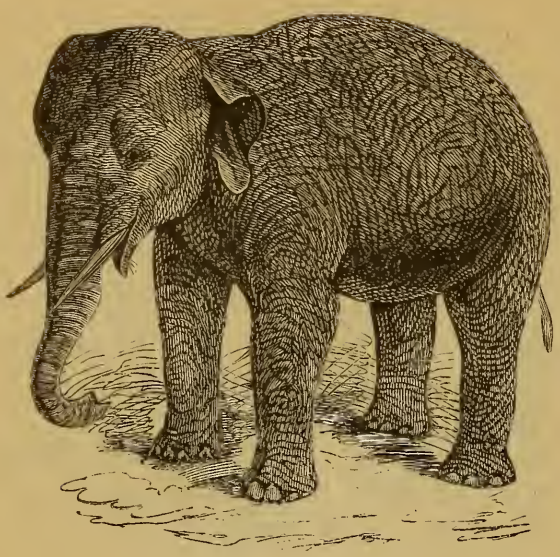
Begin the lesson without naming the subject, or opening to the picture. Speak of animals that flee from man, and those that choose to be near him. Tell of this one, who has been a frequent companion. Man does not like him, and he does not much like man, though choosing the good things man is pretty sure to have a supply of.

Yet he is an interesting creature if we can lay aside our prejudice and study him.

By this time the animal can be named, and the picture may be studied.

The case alters with the side from which we look at it. The rat may gnaw through and disfigure a wall, and we forget the *perseverance* that he shows. He is frightened away by every noise, for he is timid and has no safety but in flight; but as soon as it is still, he is back again and at work. Tell the fable of the lion and the mouse.

Such helplessness has need to choose night for its labors, and keep eyes, ears, smell, and feeling quick and sure.



Describe the head, tusks, trunk, body, legs, and tail of the elephant.

Tell in what kind of a country he lives; what he likes to eat; what he does that is peculiar; how he defends himself if attacked; and what kind of a disposition he has.

In what ways is he useful in his native countries?

The Elephant.

TEACHERS' NOTES.

Elephants are distinguished by their immense bodies, their remarkable *trunks*, and, if in their natural condition, their wonderful *tusks*.

The correspondence of part with part is nowhere shown more impressively. The average weight of the pair of tusks, in a full-grown elephant, is more than a hundred pounds. This the head must support, which would be impossible, with the weight of other parts of the head, at the end of a long neck. The great weight of body demands strength of limbs; and freedom in bending is lost where great strength is required for support. The head is thus lifted above the ground, and dependent upon the trunk, which, with its thousands of muscles, can be shortened, lengthened, coiled, or stiffened, to meet the various needs. It has exquisite sensitiveness, and serves for breathing and smelling, as well as for other uses. The foot of the elephant is inclosed in a horny sock or shoe, covering the five toes. The skin is thick and tough, and covered thinly with bristly hair.

METHOD.

As the children describe the head, show how broad it *must* be for the thick trunk and thicker neck. Let them decide themselves, in answer to the question, "What *are* the trunk and tusks?" that they are the nose and canine or eye teeth lengthened. Also, that the animal can not use his mouth in many of the ways common among other animals, for the very obvious reason of his short neck.

The "finger" at the end of the trunk must be described, since it does not appear in the picture.

The rooting up of trees calls for the action of the immense tusks, and is to be associated with the love the elephant has for the juices of the soft roots. One of these items mentioned makes occasion for all.

Tell, or call out from the class, some story of the remarkable memory of the elephant, and with it associate his revengeful disposition, when provoked beyond what his usually docile and gentle habit can bear.

The lion goes out at nightfall for his prey. He watches — listens — waits; when it is near, he steals upon it, springs, seizes it, and tears it.

For every one of these acts he has parts exactly fitted.

See if you can find them out and describe him accurately.

The Lion.

TEACHERS' NOTES.

The lion is distinguished by his *light step*, *elastic motion*, and *elegance of form*. Such qualities, united with massive proportions and great strength, are apt to be overpraised. He is called the King of Beasts, and a personification of bravery. Nations adopt him as their emblem.

The lion has indeed shown some generous, noble traits, and in rarely attacking man has deserved his praise.

His ferocity, however, is the counterpart of his majesty. What the cat is to mice and birds, the lion is to the greater number over which he reigns king.

For this absolute sovereignty he has the *keenest of senses*, *sheathed claws of great strength and sharpness*, *immense jaws*, and *long*, *sharp teeth*.

The *thighs are very muscular*, the *shoulders and fore limbs strong*.

The covering is tawny, yellowish brown; short, except on the neck and under-parts of the body.

The family consists of the lion, the lioness, and two or three cubs. Among themselves they are *playful* and *affectionate*.

METHOD.

Comparison of the lion and the cat will teach something of both. The blinking, narrow eyes, in bright light, show why noonday is the time for sleep, and twilight or night for work.

The animals going to the streams for water, or to their places of rest, determine where the lion will lie in wait. The detection of the particular rustle of leaves that means a footfall shows his keen hearing, and his seeing where others can not shows that he makes up at night for what he loses by day.

The great spring that gives him his victim shows his strong thighs and long hind legs.

Like the cat, the lion holds his prey with the fore paws till it is dead, then tears it with teeth and rough tongue.

The shaggy mane, large, full eyes, and long whiskers give him a look of great dignity and strength.

Like the cat, he does not make an open attack, but creeps silently till within reach; then "a bound, a roar, and a blow, and all is over."

This animal takes the place of a horse, an ox, and a cow, and has one of the uses of the sheep.

Though he is so heavy, his step is noiseless. He carries the water and food for a journey, and the cushions on which he rests, without seeming to be loaded.

Describe his form, his ways, and his usefulness.

The Camel.

TEACHERS' NOTES.

Camels are the wealth of the Arab. Some he keeps for their strength, some for speed, and some for those difficult journeys where all who go must be prepared to meet with danger and deprivation.

The most marked feature is the *hump—single* in the dromedary or Arabian camel, and *double* in the Bactrian.

It is a *firm, fatty substance*, that decreases when food is scarce, but increases when it is abundant again.

Like the cow, he *chews the cud*, and, unlike her, he can fill one of his stomachs with water to provide against thirst in long desert journeys. In place of the horny hoof of most animals that bear burdens, the camel has a *soft, elastic cushion*, covered with a *callous skin*. The two parts spread a little on sandy ground, so keeping him from sinking.

The eyes are *large* and *prominent*, and his vision is keen. The *brow overhangs* them so that they are shielded from the glare of the burning sun. The *nostrils can be closed* from the clouds of sand without interfering with his breathing. The *callosities or pads*, one on the breast, two on each of the fore legs, and one on each hind leg, support the weight and protect like a cushion from the burning sand.

METHOD.

The things that are *known* in the case of a foreign animal form the basis for what can be *told*. If the reading of the children has made them familiar in imagination with the desert, they can reason out the needs of an animal that must traverse it. The work of the teacher is to picture intensely one part, and let it emphasize the other. If, as in this case, they are told of the noiseless tread, they must tell what kind of a foot it involves. If told that it does work, they must, by the picture, tell what it has to fit it for work, and what traits of character it must have. The use by men of the milk of the female, the woolly hair, and the flesh, still further associates it with our bovine species.

Compare the owl and the cat.

Do you see any resemblance in their faces?

What has the cat to fit her for her place, and the owl for a very different one?

How does the owl fare in winter, when the food it likes can not be found?

The Owl and the Cat.

TEACHERS' NOTES.

The *round heads* and *flattened faces* of these two species, with their similar habits, have led to the coupling of them. The owl has been called the "feathered cat," and the cat the "furred owl." In the species of owl with pointed tufts of feathers resembling ears, there is quite a singular resemblance.

The food they seek is identical; the time of getting it also, and the stealthiness of their ways.

The cat has a *silent step*, and the owl a *noiseless flight*. The *padded paws* effect this for the cat, and the *soft, downy feathers* for the owl.

Some of the owls are very beautiful in their thick *mottled plumage*, and some are *pure white*.

The *disk of feathers* pointing outward from the socket of the eyes makes them like port-holes in a wall; and their vision, like that of the cat, is wonderful in a little light, but obscure in midday.

The owl *sleeps* much of the time in the winter, when its food is scanty, and so does not require a great amount.

METHOD.

Let those who have seen the living bird, or a stuffed specimen, tell whether or not there is resemblance; and let the others look at the picture.

Question about the habits of both owl and cat, so as to draw the parallel. Children are very ready to draw inferences. The teacher needs always to take care that they have sufficient ground.

Lead the class to decide under what circumstances the owl has the advantage, and under what the cat. The varieties in size in different species is a point of interest. The smallest are not larger than a pigeon, and the largest is of about the size of the golden eagle.

Like the eagle, the owl will sit for hours with hardly a sign of life. This habit and the peculiar wide-open eyes of the owl have given it a character for wisdom, though "wise as an owl" may have sarcasm in it. The soft, thick plumage, covering all but the tip of the beak and of the talons, makes a warm wrapping for his nights of watching, and is not heavy.

Here is the King of Birds.

How is he like the lion? Benjamin Franklin called him the *dishonest* bird.

Describe his beak and talons.

Tell what kind of wings he must have, and something about his eyes.

What care do the eagles take of their young?

The Eagle.

TEACHERS' NOTES.

The eagle is one of the largest and most powerful of the feathered tribes. Like the lion among the beasts, it is an emblem of royalty; but, like him, it lives for its own ends, and often secures them in questionable ways.

The physical peculiarities are the *strong*, *hooked beak*, and the *sharp talons*. With the latter it strikes its prey, then tears it with the beak. *The powerful wings* adapt it to its *strong* but *not rapid flight*. The golden eagle is *three feet in length*. Its color is a *rich brown*, looking golden in some parts under the bright sunlight. The age of these birds is often remarkable. It is not uncommon for them to be over *a hundred years old*.

The bald eagle is common near the falls of Niagara, where it finds fish, and the bodies of deer, squirrels, etc., that have perished in attempting to cross the river. It watches the fish-hawk, and robs it of its prey. It was from some such habits as this that Franklin regretted its being our national emblem.

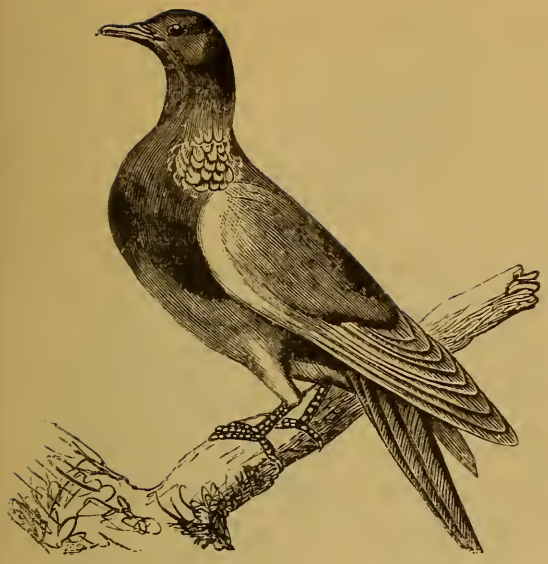
METHOD.

In beginning the study of birds, call attention to their general characteristics. The fore limbs are modified to make wings, and the two hind ones support the body when standing. Let the children see the three sets of feathers growing out of the hand, forearm, and upper arm, or parts that correspond to them. Any bird's wing will show this. The strength in a wing is always a marvel to a child. That of the eagle, if striking him, would cause instant death. The framework of the body of a bird is much lighter than that of a beast of the same size.

The beak has no teeth, but it has all the strength of a strong jaw.

The talons, like the claws of beasts, correspond to the nails upon our own hands and feet.

A covering of feathers is light and warm. Birds of cold climates have very downy feathers under the stiffer ones. The eagle, flying so long in bright sunlight, has a use for the *transparent third eyelid*, through which, it is said, he can look at the sun.



Every one loves the pigeons. Do you know why?

Try to remember what you have ever noticed about them.

Compare them with the hen and the sparrow.

Describe the plumage of one that you have seen. Remember especially the beautiful metallic colors often seen about the neck.

The Pigeon.

TEACHERS' NOTES.

Pigeons are interesting on account of their *double lives*. When they are on the ground, close about our homes and feeding from our hands, it seems as if they might belong to the hen family. But their bodies are smaller and their wings longer, and instead of staying among the poultry-birds, they are soon off on some journey or visit, at the rate of fifty miles an hour, or sometimes a mile a minute.

They are like the perching, and unlike the ground birds in general, in *pairing*.

They have no song, but their low "billing and cooing" is very sweet.

They breed often, and take good care of their young. One of the peculiarities of the pigeon family is the *milky fluid* that forms in the crop at the time of hatching, called "pigeon's milk." With it they moisten the food for their young ones.

The carrier pigeon is made useful by being trained to go to particular places, on special errands.

Wild pigeons gather in immense flocks for their journeys.

METHOD.

The pigeon is a good bird for the class to describe. Compare it with the common hen, for its more *graceful body* and its *longer wings*. If specimens can be shown, its slightly curved beak may be observed.

Its feet are more like those of perching birds, having the *hind toe on the same level as the others*, whereas in scratching birds it is higher. This point requires the foot of a chicken and of a pigeon, that the claws may also be compared.

Reference to the perfect ease with which they wait in the street, picking among the offal for the grains, till a horse is close upon them, and then, without seeming in the least disturbed, rise into the air to some convenient perching-place, till the way is clear again, shows their *power of flight*, and their long sweeps its *steadiness*.

Their disposition is shown to be *amiable* by the absence of any of the quarrelsome ways of other birds.

In language-work ask a few specific questions admitting of only short answers.

This is the industrious bird. His name tells what he is doing early and late, and all day long.

What does he get for it?

How does he keep from falling while he is hammering at the tree?

Can you think why any one should call him the *unhappy* bird?

The cuckoo and the parrot are among his relatives—both of them good climbers.

The Woodpecker.

TEACHERS' NOTES.

The woodpecker is both a climber and a percher. The *outer toe turns backward*, so as with the *hind* toe to oppose the other two, as is common among climbing birds.

The tail-feathers are *hard* and *stiff*, ending in points that, being pressed against the bark, assist the bird in keeping its position. With these helps it creeps on the trees in all directions, or fastens itself, to pursue its work with its bill.

The bill is *wedge-shaped*, and as hard as ivory. The head and the curved neck form "the handle of a hammer, of which the beak is the pointed head," and with it the bird gives strokes of great strength.

What it wants, in most cases, is the grubs that insects have left under the bark or in the wood of trees. When it has made the open way to them, it thrusts out its *worm-like tongue*, which is sticky enough to hold the young insects if they touch it. For the larger ones it uses the *barbs* on the horny tip of the tongue, piercing their skin and dragging them from their hiding-places.

METHOD.

Much of the matter given in the notes the children can reason out, if helped by a few practical questions. The hardness of the beak, and the use of head, neck, claws, and tail, are natural inferences from the fitness that everywhere in the animal world prevails between a species and its circumstances. When the points of interest in the structure are made clear, the external appearance of the bird may be pictured.

So common a bird might easily be had by any teacher who could make friends with a village boy who owned a gun, and, if not stuffed in a way suited for mounting, might be so poisoned and cured as to be equally available for use in the school-room.

Questions for language-work, added to those at the head of the page, might be—

What parts does he use for his work?

How is each fitted for it?

Refer to the sound he makes at his work, and to his note, which is not unlike that of the toad.

Find *all* the beauties of this beautiful bird.

In India peacocks are found by hundreds. Why are they uncommon here?

Learn all you can about their ways, and the traits of character they exhibit.

What would you say of a person who should manifest the same?

The Peacock.

TEACHERS' NOTES.

The peacock is one of the most magnificent of birds. The grace of form and the peculiarities of color unite in distinguishing it among the pheasants, all of which are beautiful birds.

The long *train-feathers* do not constitute its tail, which is short. They rise from the back, and can be lifted at pleasure, like an open fan. In either position they have great beauty. The *head is small*, and the *neck graceful.*

It is amusing to see the bird walking, with head turning from side to side to view itself, and always endeavoring to attract the gaze of persons. It will walk back and forth before a window, where a person is sitting, till driven away.

In their native countries peacocks live among trees; with us they are kept in the barnyards, like other fowls. A pair of them may often be seen on an English lawn.

Their *dissonant voices* and *greedy, sullen ways* prevent their being much liked.

METHOD.

This is an excellent lesson for the development of traits of character, as shown in animals. Picture the acts in each case as vividly as possible, and let the children make the application.

When the beauties of the peacock have been discussed, tell the children of its ways of showing its admiration of its own beauties, and let them name the quality they illustrate.

Dragging the train through the wet grass and mud would be *untidy* in a lady.

If the children are not familiar with the bird, tell them that it will drive away other fowls from a pan of food till it is satisfied; and even then it will stand by and make a clatter with its quills whenever they come near! On the whole, it does not prove a very enjoyable bird; and, added to this, its coarse voice, which can be heard at a distance of half a mile, and is said to foretell a storm, makes few people want one near their homes. We do not enjoy vanity and greediness even in a bird.

The ostrich lives in desert countries, under the scorching sun. The wind often fills the air with burning dust; the heat is very great; the springs are far apart; and the food is scanty.

He can not fly; he has no sheltered nest. How is it that he lives happily under circumstances so peculiar?

The Ostrich.

TEACHERS' NOTES.

The ostrich is not unlike the beasts in many of its features.

It is called the "camel-bird," and not unfitly, for it has the *callous pads* with which the camels support themselves when at rest; it lies down in the same manner, and has the same power of crossing desert countries. It is ridden like a horse, sometimes by two men at a time, and its speed is greater than that of the horse.

The cry is said to be like that of the lion. The *two toes* spread, and the *spongy pads* underneath render the same service as those of the camel.

The *third eyelid* protects the eye from the heat and glare of the sun. The *rapid pace* enables the bird to get over long distances quickly, and it knows, by a sure instinct, when water is near.

Though it is fond of the soft leaves and buds at the tops of the low trees found here and there in fertile spots, it *will eat anything.* The *plumes* we get are from the tail and wings, and are pure white.

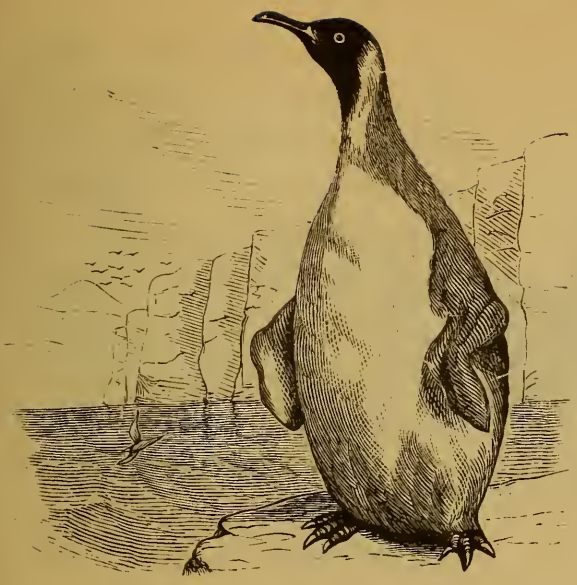
METHOD.

If possible, get the suggestion of likeness between the ostrich and camel from the class. Picture the anomaly of a *bird* that can be made to work, letting people ride him, and going in the direction they wish. The places where he is made useful, and where he lives, are such as few animals would choose, and he could leave them if he wished. Why does he not?

What has he to make him comfortable in the hot, bright noon, and what does he do when he is tired, and has no cool, green, shady place in which to rest?

How would they know an ostrich if they should see one in a menagerie? If the description given fits any other bird as well, as for example the flamingo, or the ibis, or the rhea, the American species of the same family, tell them so, and let them add what will make it exclude all but the ostrich.

When the lesson is over, let any stories they may know of the ostrich be told.



Look at this curious bird! Can it fly? Can it run?

Is there anything that it can do with ease?

It has the warmest covering of any bird; where should you think it might live?

Compare with it the duck, the goose, and the swan.

The Penguin.

TEACHERS' NOTES.

The penguin is an extreme development of a swimming bird. He seems to *fly under the water.*

The change of form and structure between such a bird and the usual types is very curious. The *feet are placed far back*, so as to throw the *body into a nearly vertical position.* The *wings* are mere *flippers*, useless on land, except in the slow crawling, but all-important in the sea. The nostrils are nearly closed by a naked membrane pervious to air.

The *body is flattened*, and presents a broad surface for easy floating.

Their food is small fishes, crustacea, and other sea animals.

These birds present a very singular appearance, on the edges of cliffs overhanging the sea, standing, as they do, in solid rows, their white breasts making them look like a class of white-aproned children.

The penguin is found only in the southern hemisphere. Its place is filled in the northern by the auk, a bird of the same family and of similar form.

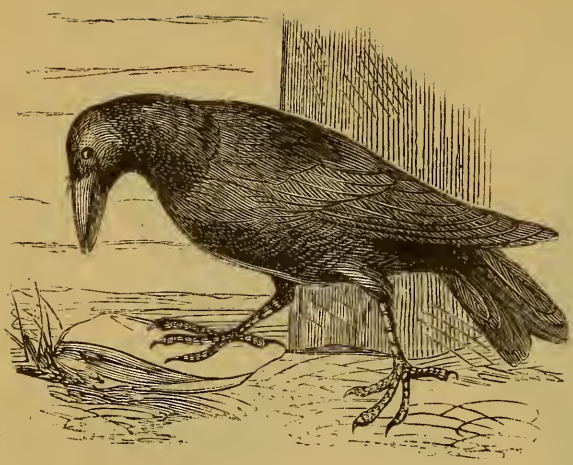
METHOD.

Question *why* it can not fly, and whether, in walking, they think it would use two limbs or "go on all-fours." It does both. Boys feel proud when they can dive and remain a few seconds under water; these animals stay so long we should be sure they had drowned if they were children, and when they come up it is often at quite a distance from the place where they disappeared.

They live in colonies, but there are some signs of bad government among them, for the stronger will steal from the weaker.

What would the children think to come upon a place, much larger than the school-yard, where every inch of ground was covered with rows of these birds, standing nearly as high as themselves?

The sound they make is like that of a human being in distress. They feed their young by letting them take the food from their own mouths, having the power to bring it back again from the crop. Speak of the oiled feathers.



This is the crow, dressed all in black from head to foot. The blackbirds, some of them with red under their wings, the bluejays, and the beautiful birds-of-paradise, are his cousins—many of them gayly dressed birds.

Write how you know him, and what you know about him.

The Crow.

TEACHERS' NOTES.

The crow is named as the type of all birds, uniting, as it does, more of their various qualities than any other. It *soars* in the air like the hawk. It *feeds upon carrion* like the vulture, and upon *vegetable food* like the ground-birds. It *imitates* like the parrot. It *walks* like the scratchers, and is the *type of the perchers.*

It is a mooted question whether it does more harm than good. The farmer often has to plant a field of corn three times, sometimes to abandon it, and plant it later with other seed. Yet the friends of the crow insist that the locusts and canker-worms come where the crow is banished, and do infinitely more harm.

The *cunning* and *mischievousness* of crows are almost beyond belief. Yet they can be tamed, and they often become much attached to those who care for them.

Among the birds their worst fault is that they rob nests of their eggs, and sometimes destroy young birds.

They are *migratory* and *gregarious.*

From their *strong* and *direct flight* comes the saying, "Go as the crow flies."

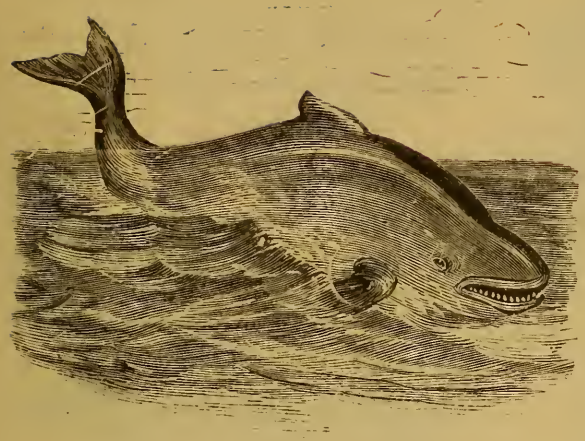
METHOD.

Begin by a little talk of the birds that go away for a season and return again, and of the different ways of going. Some quietly disappear, so that we only know it because we miss them, and some gather in companies, and spend a great deal of time in getting ready, then go in a colony. Among the latter are the crows. We know them by their black color, and by the "Caw! caw!" which we hear.

The farmers are not fond of them. Let the children tell what farmers do to protect themselves from the crows. As an example of the cunning of the crow, tell how one will investigate, and, if it is found to be safe, will pass the word to a hundred near by, who, in ten minutes, will do all the mischief the farmer has been watching to prevent.

They will fly in at windows, where rooms are being aired, if a bit of bright jewelry attracts them, and hide it in some hole in a tree.

A flock of them have signals which all understand, and seem to be able to communicate as well as if they could talk.



Is this a fish?

In what is it like the fish?

Does it differ in any way?

Is it of any use?

What other animal does it resemble?

What have all these animals in place of the legs and wings of those that live on land?

Comparison of the Porpoise and a Fish.

TEACHERS' NOTES.

The first apparent difference between the whale-like animals and the fishes is known by the touch. *The blood of the whales, dolphins, and porpoises is warm; that of fishes is cold.*

The examination of a fish shows movable plates on each side of the head, under which are fringes called *gills.* These are the lungs of the fish, taking the air that is found in water, or at least a part of the air that is also a part of water.

The porpoise has no such parts, and *no apparent means of breathing under water.* This is why we see their heads so often, as we watch from the shore. Another difference is *the position and use of the tail.* In the fish it is vertical, and in these animals horizontal. The value of this is apparent. The fishes move mostly at about the same level in the water, and the motion of the tail is from side to side. The air-breathing swimmers must be always coming up and going down in oblique directions, and so move their tails up and down.

METHOD.

If the teacher can get a living gold-fish or perch, in a vessel of water, it will materially assist in the lesson. She will have no trouble in getting some kind of small fish from the market, and the picture will serve for the whale tribe.

Porpoises are common along our shores. Though not more than four or five feet long, they have a layer two inches deep of blubber, the use of which to them will be clear to every child who has practiced bathing at the northern beaches. It is valuable to man for its oil. The skin makes one of the strongest kinds of leather known. It is used for boots and shoes.

In order to hold the written work to a comparison of the fish and porpoise, the teacher may write on the blackboard the beginnings of sentences. For example: "The porpoise is like a fish in . . . . . ." "He is unlike a fish in . . . . . ." As a further guide to the second point, she may direct that the blood be spoken of first, then the breathing, then the tail.

Where must we look to find the frog and the toad?

Tell how their ways and their forms are unlike.

What do you know of their *early lives?*

Did you ever see either of them eat? and do you know what makes them feel so cold?

How do you account for their long leaps?

The Frog and the Toad.

TEACHERS' NOTES.

These creatures, with a few others less commonly known, are called *amphibians*, from their *double life*. Their existence begins in the form of tadpoles. They have, in this state, no limbs, but a long tail is the means of locomotion, and they breathe by means of gills, as fishes do. After a while the four legs appear, and the gills are soon lost, their place being taken by internal lungs. The naked skin is kept in a moist condition, and does a part of the work commonly done by lungs, or in water by gills.

The frogs differ from the toads *in having teeth* on both jaws and on the palate, and in having *webbed feet*.

Toads have a warty skin.

The two species are alike in having *very long hind legs* for leaping, and very human-looking arms and hands.

The backs have a *shelving form*, like a low roof. Their eyes are very *prominent*, and the mouth *wide*. *The tongue is folded in the mouth*, and covered with a sticky fluid. They *hibernate* in winter, and seem to be dead.

METHOD.

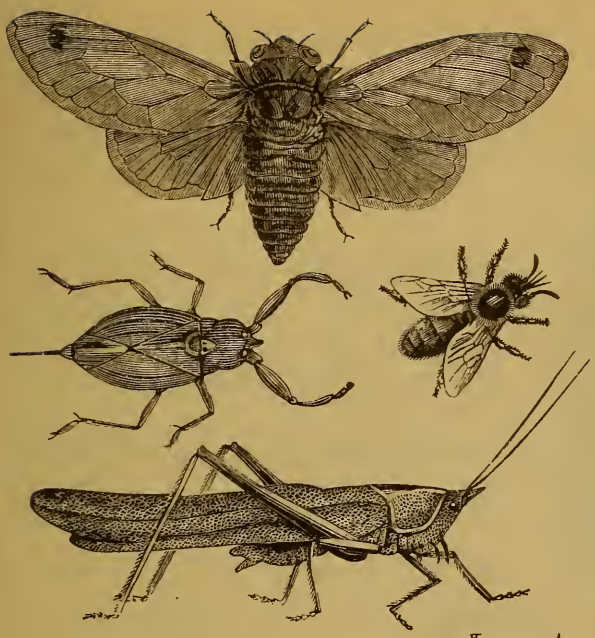
The best description may perhaps be obtained by comparing these two species with each other, to learn how to know them apart. It is perfectly practicable to have the living species in the room at the time of the lesson.

The cold blood and peculiar respiration must account for their ability to live with very little air; though under such circumstances there is no growth.

The way they call and answer shows that they have good hearing and some intelligence. Let the fact call forth this inference from the class.

Knowledge of the use of their "great eyes" in finding the shoals of small insects, the swimming in among them, and thrusting out the tongue, the sticky fluid of which takes great numbers, will impel the boys to watch instead of pelting them.

The food of the toad in gardens is what the farmer is very willing to spare. He sometimes keeps one in his hot-bed.



In what are all these little creatures alike?

Each kind has a different name, but there is one which belongs to them all. See if you can find what it means. Name the sounds made by the different ones.

Some are very beautiful, some are useful, and some are troublesome and harmful.

Insects.

TEACHERS' NOTES.

Under a great variety of minor peculiarities, insects, for the most part, agree in having the body in three parts—*head*, *chest* or *thorax*, and *abdomen*.

The head has usually three pairs of jointed appendages, of which the first are *feelers*.

All true insects have *three pairs of jointed legs* attached to the thorax, and usually *two or four wings*.

The digestive organs are in the abdomen.

The mouth has two principal forms, one for *chewing*, the other for *sucking*. The wasp, hornet, and bee combine both.

The heads of most insects only move as the body moves; but they are furnished with very wonderful eyes, in which a great number are united in one, giving vision in all directions. Besides these, many insects have *three simple eyes* in the forehead.

Beetles, crickets, grasshoppers, ants, wasps, bees, moths, butterflies, and common flies, are among the most common insects.

METHOD.

Begin with the grasshopper, and get a description of the legs; then see if the same general character prevails among the other species.

The wings vary more; some of them may be described in simple words, as *straight wings* in the grasshopper, *scale wings* for the moths and butterflies, and *sheath wings* for the beetles. Let the body be next studied, to see to what part legs and wings are attached.

The bee and beetle may be contrasted, in the kind of food, and the manner of taking it.

The children will be amazed to learn that the spider is *not* an insect. The difference that will be most apparent to them is the *eight or ten legs*, and the different kind of covering. Tell them of the centipede and the scorpion, as of the same class.

The fly makes a buzzing sound; the bee and mosquito hum; the grasshopper and cricket chirp; and the katydid talks. Most of these sounds are made by the rubbing of the thighs.

How doth the little busy bee
Improve each shining hour,
And gather honey all the day
From every opening flower!

How skillfully she builds her cell,
How neat she spreads her wax;
And labors hard to store it well
With the sweet food she makes!

The Honey-Bee.

TEACHERS' NOTES.

In order to know about the bees, we must study them in their homes, which are either natural or artificial hives. They may as truly be called domestic animals as the cow or horse, so entirely are they brought into the service of man.

In the hive are three kinds of bees: *the female, the male or drone, and the worker.*

One of the females is the *queen.* She lays all the eggs, and so is mother to the young bees.

The workers gather the sweet *nectar*, or flower-honey, *pollen*, or powder, and something from buds called *propolis.* The propolis is used to fill the crevices of the cells, and for repairs.

The *wax* forms in scales on the lower part of the abdomen of the workers, and is rubbed off by their legs. This makes the cells, and shuts out the light if the hive is of glass and open.

The cells are all alike, except those used for hatching, and are hexagonal, or six-sided, in form.

The queen-mother lays a *great many* eggs. Of these, the most become workers, quite a number drones, and *one or two queens.* These young queens, when they come to be of age, are very troublesome to the old one, and she collects a swarm and goes to a new place. Some of the other queens follow her example, and the young ones are left. These have a battle, till one gains the victory, and after this there is perfect harmony and good government.

If empty hives are placed near the old one at the time the colonies leave it, the new swarms will generally take them. The inclosure for the hives is called an apiary.

A hive of bees will make more honey than they need; and they suffer no loss if a part is taken for the use of people. In such cases food is provided in winter, to prevent them from eating the summer store, as they would do in a wild state. Tell this, so far as is needful, in simple language, and question for the writing.

THE STUDY OF PLANTS.

Introduction to Number Three.

The systematic study of plants is of necessity difficult. So many new words meet the learner at the very threshold, that he is likely to miss for some time really *seeing the plants.*

While believing most heartily in the study as a branch of early education, the author deprecates such lessons as teach first that a plant has root, stem, and leaves, which adds nothing to the knowledge of an ordinary child ; or, that leaves may be serrate, dentate, crenate, etc., which, though pleasantly illustrated at the time, are subsequently held in the mind by repetition till the ideas detach themselves from their real center, and are dead weights to the memory.

The language lessons that follow claim nothing as a system of botanic studies. They are occasions for getting, in all natural ways that the teacher may command, into real though slight acquaintance with flowers and fruit-bearing plants ; they are a preparation for pursuing with interest afterward such studies as those of Professor Gray, Miss Youmans, and others; just as our children learn *to write* before studying penmanship.

The lessons will be found to be more *subjective* than those upon animals. It is the *relation of flowers to people* that gives them their real charm. Children's own experience—finding, gathering, and giving them ; the care of them, modes of arranging, and all that makes up their *personal* delight in them, with the fanciful, poetic, and symbolic meanings attached to them—are fitting subjects for thought and feeling, and admirably adapted to language-culture.

In carrying out the plan, the teacher may give herself *the widest range;* satisfied if only she is refining and elevating her pupils in thought and feeling, and securing appropriate language.

Whatever is within the grasp of the children in poems of flowers or fruits, should be read to them, and, if possible, taught them.

"The Daisy," by James Montgomery, "Daffy-down Dilly," and others like them, are expressions of the way that flowers appeal to our *moral natures,* as do animals by their traits.

ANEM'ONE

VIOLET.

Which of the early wild flowers are most beautiful?—most fragrant?—most common? Where may each be found, and by what do you know it when you see it?

The Spring Wild Flowers.

TEACHERS' NOTES.

1. THE ANEM'ONE. It is called the Wind-flower, perhaps from its pretty way of nodding its head in the wind. Each flower is borne on a separate thread-like stem, and has but a single set of flower-leaves. These are white, tinted at the tip with pink or purple. There was a pretty fancy that the flower was pink, but that something happened to the goddess from whom it was named, and that it turned pale.

The edge of the leaf is deeply cut, fine and very pretty.

THE HEPAT'ICA is like the anemone in form. Three leaves upon the flower-stem seem at first like a flower-cup, but they are below the flower, and form no part of it. The leaves are evergreen, and the tufts of bright blue flowers rising from the old foliage, and soon followed by the new woolly leaves, are favorites wherever they grow.

BLOODROOT, a pure white flower, whose root has a red juice, grows in rich woods, and blossoms at about the same time; and in the fields the delicate little

BLUETS, blue-white, or white, with yellow eyes and tube-shaped centers.

TRAILING ARBU'TUS is called, wherever it is found, *the* mayflower. It was the first seen by the Pilgrims when they landed at Plymouth Rock. It has a woody stem, thick green leaves, and clusters of pink and white flowers of rare beauty and sweetness.

But best known of all is the

VIOLET. Blue, purple, lavender, yellow, and white ones may be found. Some of the varieties are large and showy, like the marsh and bird's-foot, and others small and fragrant. The marsh violets have longer stems and grow thickly, making the meadows blue.

The parts of the flower-crown are not alike, as in the other flowers. The lower one has a hollow spur. There are five in all. Cultivated violets are double and very sweet. The leaf is smooth and glossy.

DOG-TOOTH VIOLETS, or adder's tongue, are not violets, but yellow lilies, with long, pointed, parallel-veined, and spotted leaves.

THE CROCUS.

THE LILY OF THE VALLEY.

Write below what flowers come first in the gardens, and what their colors are; whether or not they are fragrant, and why we are so glad to see them.

First Garden Flowers.

TEACHERS' NOTES.

THE SNOWDROP. Before the spring violets, before any of the wild flowers, comes the little snowdrop; often met by a fall of snow which, delicate as it looks, it very little minds. Each shoot rises to about four inches, and from it hangs a lily-like flower, its three outer petals white, and three inner ones just penciled with pale green; and with a delicate, pleasant perfume. The plant grows from a bulb, which may be taken up when it it has done flowering till October, or may be left in the ground all summer. It is so pretty and so easily raised, it is a wonder it is not more common. Next comes

THE CROCUS, purple, yellow, or white, with pencilings of other shades of color. The flowers do not open wide, but the yellow centers make long shafts that bring them to the edge of the flower-leaves.

Like the most of these early flowers, the leaves are not very noticeable. Coming so early, the flowers make a kind of almanac, telling us that spring has come.

THE HYACINTHS, often seen with the crocus in garden-beds, are usually such as have been kept growing in the house all the winter. They grow in clusters at the end and sides of a tall straight stem, and are very fragrant. Their colors are violet, pink, yellow, and white.

THE TULIPS are the most showy of the early flowers. Two pale green leaves appear as soon as the blades of green grass are seen, and between them soon follows the tall, straight stem bearing this erect, proud blossom. They are single and double, red, yellow, and white, or any imaginable combination of these colors, but have no fragrance.

THE LILY OF THE VALLEY is one of the last of these to appear, but it is prettiest of all, set around with its large parallel-veined smooth leaves. The flower-stalk rises six or eight inches, with its line of drooping, cup-shaped, pure white, and very sweet lilies with their scalloped edges turned outward.

All these plants grow from bulbs that are planted in the autumn, and after they have blossomed they soon die down and are *bulbs* again, so making room for other plants.

THE POPPY. WILD ROSE. FIELD DAISY.

Gather every kind of flower that can be found, learn something about each, and write it as if you were telling what you knew to a little brother or sister.

Summer Wild Flowers.

TEACHERS' NOTES.

THE DANDELION, common as it is, is a beautiful study. Instead of being, as it appears, a single flower, it is a large collection of tiny florets; the colored part of each a long yellow banner, and all wrapped around by a green sheath that closes at night till the delicate seeds are ripened, then opens wide and falls to let them appear for a little as a downy ball, soon to float away, the feathery down carrying them as a sail carries a boat.

The leaves of the dandelion are long, with irregular edges. They have a bitter taste, and when young and tender are used as "greens" for the table.

THE FIELD DAISY, or WHITEWEED, is another collection of blossoms. Only its *outer* row of florets have banners or *rays*, the inner ones being tube-shaped, yellow flowers closely pressed together.

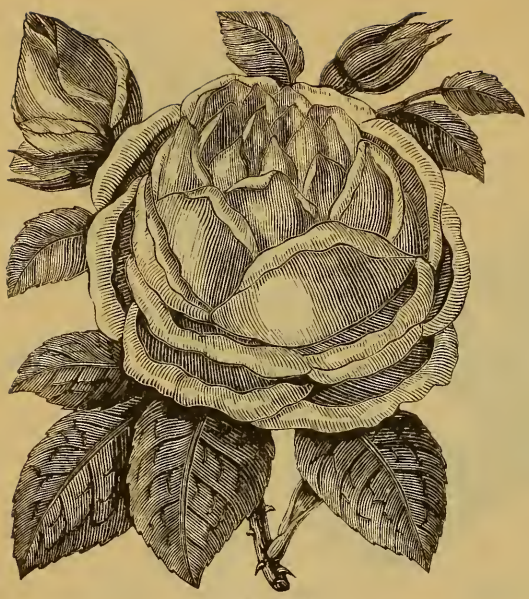
BUTTERCUPS have much more to tell children than "whether or not they love butter." The two sets of flower envelopes are plainly shown, as well as stamens and pistils.

THE WILD ROSE, Sweet Brier or Eglantine, is to be found along the edges of woods or fences. It is the ancestor of all the roses. The double sets of flower-leaves appear each in five parts. The color is a beautiful pink, and both flowers and leaves are fragrant. The latter grow from the sides as well as ends of their stems.

THE POPPY, *half* wild, may be described from the picture.

THE COLUMBINE is one of the prettiest of early summer flowers. It is found clinging to banks or rocky ledges; its red *petals* each pointing downward as the flowers hang, but with a long spur or horn at the top, and the *sepals*, or parts of the outer flower-cup, of the same color, and folded down between the petals. The flowers contain honey, and are much sought by the bees.

The descriptions mean little or nothing without the flower, or a picture that shows its parts. The number given affords means of selecting such as are to be had. Others not mentioned may take their places if more easily obtained.



A DOUBLE ROSE.

LILIES.

If you do not know this lily or rose, study those that grow where you live, and write the things about them that you wish to remember.

Roses and Lilies.

TEACHERS' NOTES.

Next comes the summer, and with it THE ROSES. What kinds will we choose for our gardens? for not even in an imaginary garden could we have *all* the hundreds of varieties that have come from the pretty pink wild rose.

Of the old-fashioned roses in country gardens, growing almost wild, we have *the large Red Rose*, low, spreading rapidly, and not *very* double; and *the pink Cinnamon Rose* with small, crushed petals and sweet scent. For climbing roses we have *the Multiflora*, coming early, small and deep red, and, as its name denotes, full of blossoms; or the *thick double pink Prairie Rose*, very showy but without fragrance.

The Scotch Rose, pure white, yellow or pink, is very small but sweet, with a foliage of fine dark green leaves, and later in summer pretty pods or hips.

Of less hardy kinds we have *Monthly Roses* in all colors, some of them prettier in half-open buds than in blossoms. The *Tea Roses* are so named from their peculiar fragrance, and *Moss Roses* from the covering on sepals and stem.

THE LILIES vary even more. The beautiful little *Lily of the Valley* and the *Dog-Tooth Violet* have been described.

The Day Lily, a low plant having large, smooth leaves, with very marked parallel veins, and growing from the center a bunch of beautiful white lilies, is common in gardens.

Tall Lilies, like the one of the lesson, in white, yellow, deep red, and mixed colors, and upright or nodding, are found in cultivated varieties and also wild.

The Water Lily stands all by itself. It has a number of bright stamens and pure white petals set in regular rows, and it floats on the surface of the water, held by its long, strong stem to the roots below. Added to this its very delicate but marked fragrance makes it a favorite flower.

The Calla, or house-lily, is not a lily, but a palm, with its single white flower-leaf folded around a long spike covered with small yellow florets, and often falling over its head. The leaf is a green roll as it first appears.

PANSY.

MIGNONETTE.

CHINA PINK.

Why do you like *these* flowers? Name others that are fragrant. Describe the pansy and the pink, and any others you may know.

Fragrant Flowers.

TEACHERS' NOTES.

Every garden should have its bed of PANSIES. Comparison with the bright little Lady's Delight, or *tricolored violet*, shows how much may result from careful culture. The best varieties are obtained either from cuttings or seeds from florists' plants, as they soon slip back again into the original kind if left to themselves. Pansies are found in a great variety of colors. In a hundred there need be no two exactly alike. The word comes from one meaning *thoughts*, and it almost seems as if a bed of pansies lifted real thinking, if not speaking, faces to those who view them. Their fragrance is delicate but delightful, and their velvety petals surpass any woven tissue in smooth softness.

MIGNONETTE is another favorite on account of its fragrance. The tiny flowers, whose greenish petals seem little broader than threads, and little more marked than the orange-colored stamens, grow in clusters or heads about the sides and tips of the leaf-stems. The fragrance, though it does not seem strong, soon fills a room, yet without loading the air.

THE SWEET PEA is valued both for its beauty and fragrance. It is a singular blossom. The petals seem really to make a *flower-cover* to the parts that are within. The outer and upper, called sometimes the *umbrella*, gives protection to all the rest. Lifting this we find the two side ones folded around like *wings*, and the remaining one closely covering from below the working parts within. The colors are pink and white, purple, red, and variegated. It climbs like the garden pea, and forms a pod for seeds.

GARDEN PINKS are also very fragrant, and they too have a form of their own for blossoming. Each petal has a long slender claw, held by the calix or flower-cup, and when open the blade of the petal bends outward at a right angle, making a nearly flat flower-crown. The June pinks are very double, and their outer edges are finely fringed.

THE SWEET ALYSSUM, a small white flower, forming heads at the tips of all the stems, is one of the most common plants for borders, and for arranging with showier flowers in bouquets.

AZALEA.

RHODODENDRON.

Describe shrubs that bear flowers. Which would you choose for grounds that you could make as pretty as you liked?

Flowering Shrubs.

TEACHERS' NOTES.

AZALEAS and RHODODENDRONS are among the most gorgeous of garden shrubs. For masses of color, their great clusters, covering for the time almost the entire surface of the bush, are unequaled. In every tint and shade of color, save blue, varieties are found, and though large the flowers are delicate. The pictures do not indicate the relative size, both being more than two inches across in most of their varieties.

THE PYRUS JAPONICA, or *Japan Quince*, is a large shrub, with bright-red blossoms growing all along the branches, and glossy leaves. In some countries it bears a small fruit.

FORSYTHIA, a yellow flower on a tall, straight-stemmed shrub, before there is the least sign of leaves, is perhaps the earliest to appear.

SPIREA is a white flowering shrub of early summer, with fine, powdery-looking blossoms in advance of leaf foliage.

THE FLOWERING ALMOND bears pink and white thick blossoms all along its stems.

THE LILAC, common everywhere, is a tree-like shrub, bearing long, close clusters of lilac, or white blossoms, of sweet but heavy fragrance, and smooth, heart-shaped leaves.

THE SYRINGA, a tall bush, more spreading than the lilac, with five-petaled cream-white blossoms, is called Mock Orange from the fragrance of its flowers, and some resemblance which they bear to orange-blossoms.

Another variety of syringa bears later in summer a pure white blossom which has no fragrance.

WEIGELIA is coming to be common in town and city gardens. Its purplish and white blossoms are very pretty, and it is hardy.

ALTHEA, too, is a pretty shrub, its blossoms, like those of the hollyhock, looking like crumpled paper roses fastened close to its stems.

There are many others, and any of these may be more minutely described in their appearance and habits.

PETUNIA.

DRUMMOND PHLOX.

Write about such seed-flowers as you would like to plant and care for in a box of earth or a garden-bed.

Plants that grow from Seed.

TEACHERS' NOTES.

Morning Glory, Convolvulus, Nasturtium, Asters, Balsams, Petunia, Phlox, and many more are quite sure to do well if the ground is good, and they have plenty of sun and water.

Verbenas are among the most desirable of summer and autumn flowers. A few plants will soon spread so as to cover a large space. Their stems lie flat on the ground, and roots strike down from joints of leaves, forming new plants. The flowers are in flat, close clusters, or flower-heads, and they may be cut all the season through, and will blossom the better for it. Their colors are very varied.

The Morning Glory should be planted along the fences of the vegetable garden, and among peas, beans, and grape-vines.

A bed of Petunias is very beautiful. The flowers are single in the common variety. The corolla is not divided into petals, but entire or whole. The colors are pink, rose, rose-purple, white, and rose-color and white mixed. It is not a pretty flower to cut, and the leaf is coarse.

Drummond Phlox is showy and at the same time delicate. It grows from twelve to fifteen inches high, and its blossoms are in clusters. Each is flat and round at the top, and the center is a tube. Many of them are of deep crimson with white centers; some have white stars. They remain till the frost comes, and may be cut like the verbenas.

Balsams are bright pink and white soft blossoms, growing along the sides of their leaf-stems under the leaves. The double ones are exceedingly pretty. They have no length of stem, and so are not much used for bouquets. They are best arranged in a plate with a setting of dark-green fine leaves.

The Nasturtium is one of the choicest of the yellow flowers. It is a good flower for a bank or rockery. Its petals are irregular, and its colors varied in yellows and orange-browns.

There are very many more of the annuals that deserve notice if space allowed.

CHINA ASTER.

GLAD'IOLUS.

In what respects do late flowers differ from earlier ones? Describe any that you think beautiful.

Autumn Foliage.

TEACHERS' NOTES.

The autumn flowers are noticeable for their deep colors, and often for their thicker flower leaves and stems. The leaves of some seem like *paper*, as in Everlasting and Immortelles; all of them keep longer in the house, and bear sun and drought better than earlier flowers. As the coming of the snowdrop and the violets announces the spring, the frost that kills the late flowers foretells the winter.

THE ASTERS and ZINNIAS, ray-flowers, planted as seeds in the spring, are very beautiful now. The double varieties, in pink, violet, and white, take the places of the verbenas and pansies, though these can be kept almost as long by covering them at night.

DAHLIAS are tall, elegant plants, with very regular flowers. They are prettier in the garden than in the room, but are used for large bouquets.

SALVIA, or the Red-flannel Flower, is very showy. Its petals look like pointed bits of scarlet flannel threaded on a stout string.

GLAD'IOLI are produced in almost all flower colors, and are often very brilliant. They grow without stems all around a flower-stalk. The corolla is in six points at its edge, three of them rolled back making an upper lip, and the others falling outward or downward.

FOLIAGE PLANTS, like the Coleus and the so-called "Dusty Miller," in their many varieties, are much used for flower-gardens, and make very effective groups.

Quite as beautiful as the flowers, and attracting more attention, are the autumn leaves. Some, like the SUMACH, begin quite early to turn from green to bright deep red, the MAPLE-TREES and WOODBINES become brilliant, and soon all the trees, except the evergreens, change to yellow, orange-red, or brown, and all the colors are beautiful in their places, softening and relieving each other by their combinations. The ferns and bushes change too, so that all nature is in different dress.

HELIOTROPE

FUCHSIA.

Where must house-plants be kept, and what care do they require? Would you like to be a florist?

House-Plants.

TEACHERS' NOTES.

There are few prettier ornaments to a room than thrifty flowering plants, particularly when the frosts have killed the garden flowers.

Teachers may do much toward increasing the love for them, and introducing them where they would be a comfort and blessing.

The houses of glass built by the florists, and the care they take, show by their results that most plants from whatever climate will do well with light, warmth, and moisture. Yet each may be studied, as each individual among people, for its special aptitudes.

The range of plants is now so large that only the most universal can be treated by the teacher in any single class. The *general care*, the *troubles to avoid*, and the *helps to special success*, belong to the particular species, and can not be provided for here. GERANIUMS are among the commonest, and at the same time most desirable. Their variegated or variously edged leaves, their clusters of bright blossoms, always in accord with the color of the dense foliage, give them place everywhere.

FUCHSIAS, too, are never too common to be enjoyed. They are sometimes called Lady's Eardrops—it is easy to see why. Oxalis, Lantana, Cactus, Arbutelon, Lobelia, are all special in some way. Heliotrope is of interest from its fragrance and its delicacy of flower, though its leaf has no attraction.

In ending the study of flowers, some *general statements of the office of parts* (omitted when parts were first named, that they might grow naturally into children's knowledge) may be appropriate.

Every child should know by heart the verses on "The Use of Flowers," by Mary Howitt:

"God might have bade the earth bring forth
Enough for great and small;
The oak-tree and the cedar-tree
Without a flower at all."

HUCKLEBERRY.

BLACKBERRY.

Did you ever pick berries? Tell where the huckleberry grows and how. What makes it hard to pick blackberries.

Wild Berries.

TEACHERS' NOTES.

The Whortleberry, or Huckleberry, grows on high bushes in marshy places, or on the edges of woods. In the spring we find the greenish-white clusters of blossoms, purse-shaped, and their edges tinged with red. The fruit is ripe in summer. It is a round, black, glossy berry, having a skin inclosing a juicy pulp, and a number of hard seeds.

The blueberry is covered with a fine downy bloom, like that of the grape. It is sweeter, has fewer seeds, and so is more juicy than the huckleberry.

Both have low varieties of bushes, the dwarf huckleberry growing in open pastures and on hillsides. Its fruit is dry and insipid, but much picked by children.

The low-bushed blueberry is of light, bright blue color, and very sweet. It is found on mountain-sides and among bushes, rising but ten or twelve inches from the ground.

The Blackberry, sometimes called dewberry, that has a trailing stem, and grows in rocky or sandy pastures, is the first to ripen. The white spreading petals make a large blossom, and the fruit is like a *cluster of berries* around a whitish center.

The High Blackberry grows everywhere, along fences or thickets, has sharp prickles, rough leaves, and blossoms in clusters. The fruit is oblong, larger than that of the low blackberry, and with more of the small berries in each head.

The Partridge-berry is prized for its pretty, creeping vine, with round leaves and a beautiful sweet-scented blossom, which afterward becomes a bright-red berry. The fruit ripens late and remains all winter, so that we sometimes see flowers and last year's berries on the vine at the same time.

The Elder-berry grows on a soft-stemmed shrub, four or five feet high. Its white blossoms are in clusters forming a large flat head. The black-purple fruit is used for making wine, said to be good as a medicine.

RASPBERRY.

GOOSEBERRY.

Name and describe the garden berries. Tell which grow on climbing vines, which on bushes, and which on low plants?

Cultivated Berries.

TEACHERS' NOTES.

The Raspberry, found growing wild, and common where woods have been burned, is improved greatly under cultivation. Like the blackberry, the fruit is a collection of berries rather than a single one, but, unlike the blackberry, all these separate, when ripe, from the center around which they grew and cling together, leaving the center hollow. The fruit is sweet and very agreeable.

The Strawberry, when wild, is a small, sweet fruit, quite unlike ordinary berries. The part that formed the center in the blackberry and raspberry *is the fruit* in the strawberry, and on its surface are the yellow seeds. Under cultivation, the fruit loses in a measure its sweetness and peculiar flavor, but grows much larger.

The strawberry is easily cultivated, and, coming before the others, is greatly prized.

The Currant is found in every vegetable garden; the bright scarlet berries hanging in beautiful long clusters from the sides of a stem on a slender bush about four feet in height. The berries are of a sharp acid taste, and are used for jellies and wine.

The Gooseberry is of a dull purplish color, and larger than the currant.

The Cranberry is known by every one, as it is found for sale in the markets; but few know how very beautiful and interesting the meadow cranberry is when growing. Its delicate stem and leaves seem insufficient to support the heavy berry that turns red, first on one cheek, then on the other, and lastly all over.

There is language-culture, as well as beauty, in these verses by an English lover of nature:

"'Tis such a wee, fair, dainty thing,
You'd think a greenhouse warm
Would be its proper dwelling-place,
Kept close from wind and storm.

"But on the moor it dwelleth free,
Like a fearless mountain child,
With a rosy cheek and a lightsome look,
And a spirit strong and wild."

BEAN.

ASPARAGUS—(root, flower, shoot, native sprig).

Describe the bean and the pea. What part of these plants do people eat? Describe also the asparagus.

Summer Vegetables.

TEACHERS' NOTES.

THE PEA is one of the first products of the vegetable garden. The vine is delicate, of light-green color, and its curling tendrils hold it to the strings or fine brush that are set for its support. The white blossoms, which have been described in the sweet pea, grow into long, round pods, which open like a box on its hinges, and show from four to seven round seeds. They are used almost as soon as they form for green peas, and by being planted at intervals furnish a supply to the table till late summer. When dry they are used for soups.

THE BEAN is also a climbing vine, though some varieties are low. It has no tendrils like the pea, but twines around a pole or other support. The blossoms are of purplish color, except in the scarlet-runner, which is cultivated chiefly for its flowers. The pod is longer than that of the pea, and in many species flattened, as are also the seeds within.

Some kinds of bean are used for the table as soon as the pods form, under the name "string-beans."

THE ASPARAGUS is coming to be a common spring vegetable. The part that is used is the tender shoot when it first springs from the ground. The heads look like overlapping scales. If left to grow, the plant sends out branches with fine feathery foliage of dark-green color, greenish-yellow flowers, and small red berries.

LETTUCE is another of the early garden plants. Its leaves fold around, forming a close head. The inner ones are of pale-yellow color and very much crumpled. When fresh, they are very delicate, and are used as a salad.

CABBAGE is also used when its leaves form a head. The plant lives two years, and in the second forms flowers and seed.

CAULIFLOWER is raised for its flower-heads, which contain nourishment. It is much used in the form of pickles.

RHUBARB has a thick stem, which when sliced and cooked is used for sauce and pies.

In this collection, we have the *flowers*, the *leaves*, the *stems*, and the *seeds* of plants used for food.

TOMATOES.

BEET.

Describe these fruits and vegetables, and tell for what they are used. Write something about the orange and lemon.

Larger Berries and Fleshy Roots.

TEACHERS' NOTES.

The Tomato is a red or yellow *berry*, having a thin but tough outer skin, a juicy pulp, and seeds. The pulp forms divisions which inclose clusters of seeds. In consistency it is not unlike the Orange and Lemon, which are also berries with a tougher skin. There are four special varieties.

The Orange has its pulp in from eight to twelve sections, which may be separated without breaking their walls. Within these sections the mass is made up of little sacs or cells, containing the juice. The whole is covered with a dense white wrapping, on the outer surface of which is the yellow peel.

The Lemon is made up of sections, whose walls adhere. The rind or peel is tougher than that of the orange, and the juice is very acid.

Oranges are used for desserts uncooked—Lemons mostly for the flavor of their juice. The tomato is eaten raw with vinegar, but more often cooked.—Great quantities are preserved in sealed cans, for winter use.

The Beet is valued for its fleshy root. To the plant the root is the store of nourishment laid up in its first summer for the growth of the flowers and seeds of the second, at the end of which its life is over, except as it continues in the seed. A few plants are left to grow seeds, but the most are taken for the table after the first year's growth.

The color is bright but deep red. When young they are tender and delicate, and later they are used with vinegar as pickles.

The root is round, with a smaller tapering root running deep, or like the picture. All around it are fibers, which are the real roots of the plant.

The Turnip is a white, fleshy root of flattened form and stronger flavor. It is a biennial like the beet, as is also

The Radish, which is long, tapering, deep red on the outside and pure white within, with a hot, biting taste. When young and crisp it is much liked.

One variety has the round root.

MELON.

CUCUMBER.

Tell how cucumbers, squashes, and melons grow, and how each fruit is used.

Melons, Cucumbers, and Squashes.

TEACHERS' NOTES.

The Cucumber is an oblong fruit, used most when green. It grows upon a trailing, running vine, whose flowers are deep yellow. In some countries the yellow ripe fruit is used, but while it is eaten in this country by some it is commonly preferred green. When half-grown, it is gathered for pickles under the name "gherkin."

The Melon is a delicious fruit with a hard rind. Its varieties are the cantaloupe, the nutmeg, the green citron, and the watermelon.

Some of these have the outer surface broken in a net-like way, some have deep furrows or creases running from stem to eye, and some are perfectly smooth.

The pulp is of greenish color and very sweet. It is eaten by itself or with salt, and sometimes pepper or ginger, for dessert. Melons only grow in a good, light soil, with plenty of warmth and sunshine. In colder climates sunny banks are chosen for them. When fully ripe they are are among the choicest fruits.

The Watermelon grows much larger than the others, with a smooth, dark-green or spotted rind, a red and white juicy pulp, and black seeds.

The citron that is used in cake and sweetmeats is a kind of watermelon.

The Squash and Pumpkin are plants of the same kind, though with different flavors. They grow to an immense size, and are kept for winter use.

They are yellow throughout, with white seeds, are much used in cooking, and when abundantly grown given to cattle.

One form, the *orange gourd*, is small, and when ripe closely resembles the orange. The rind of the gourds will harden when dried, and they are often used as vessels and drinking-cups in rural districts. Boys make Jack-a-lanterns of hollow pumpkins.

All the fruits of this lesson are called *gourds;* they differ from the berries in the thicker pulp and the harder rind.

POTATO.

SWEET POTATO.

Where do we look to find, in these plants, the part we want to eat? Describe each.

The Potatoes.

TEACHERS' NOTES.

The Potato has a place in all vegetable gardens. It is rather a low plant with a coarse leaf, but a pretty purple blossom. The fruit is a ball or berry, and is not used. The potato is cultivated for the *fleshy tubers* that form at the ends of the underground stems. Loosening the ground about the roots of the potato, we find that some of the stems have apparently lost their way, and, not getting up into the air and light, have not borne leaves and blossoms, but, instead, these fleshy masses that we call potatoes.

They are *hard* and *white*, with an *irregular form*, and with *dimples* on the surface. If allowed to remain in the ground and kept from freezing, or if, as is usually the case, kept in cellars during the winter, each of the dimples is found to contain an *eye or bud*, which, nourished by the pulp of the potato-tuber, grows into a shoot which is a new plant, and if set in the ground will produce tubers. The tuber shrivels and is of no use for food after these shoots attain any size. The potato is as common a food as wheat bread and as wholesome. By scraping the pulp and adding water, the *starch* may be separated and shown.

The Sweet Potato grows differently. The root is a *large, fleshy tuber-root*, which, while it lays up nourishment like the beet and turnip, also sends out *trailing runners;* and these runners, resting on the ground, send down into it from any joint roots which at once thicken into tubers, so that from a single plant a great many are produced and used for food.

Sweet potatoes are of yellow color, with a brownish skin.

Their flowers are very pretty, with entire or whole corollas, like the morning-glory, of purplish-red color.

They grow abundantly in the Middle and Southern States, and are much valued for food, but can not be kept so well as the common potato, nor used in so great a variety of ways.

BARLEY.

RYE.

INDIAN CORN.

BUCKWHEAT.

Name the grains, tell how they grow, and for what each is used.

The Grains.

TEACHERS' NOTES.

THE GRAINS form the substantial part of vegetable food, in all but coldest climates.

In hot countries *rice* is the staple article, and wheat is our bread. Grains are like grasses in having *jointed stems*, generally *hollow*.

The hard seed, called a grain, is *wrapped* either singly, in twos or threes, or in a whole ear, like corn, *in a husk*. The seeds are the products of flowers, as in other plants, but the flowers have not petals and sepals; but when the seeds are formed they have wrappings of their own.

Ears of all the grains, unless it should be rice, can be had at almost any time of year, so that the glumes can be opened and the descriptions made from actual observation and comparison.

The straw of these grains is used for a large number of well-known purposes; that of a kind of wheat grown in Italy for the fine Leghorn hats and bonnets.

WHEAT has a long, thick ear, nearly four-sided. Its grains are free, and some species have the *awn or beard*. From it we have all our white or fine flour, and much of our starch.

BARLEY, used in some countries for bread, is most used here for brewing beer.

OATS have, instead of the clusters of seeds in a central spike, drooping spikelets on fine long stems. Each spikelet has a twisted awn or beard. Oats are given to horses as their chief food, and oatmeal is much valued in a coarse form for the table.

RYE is of darker color than wheat, growing in much the same way. It is used to make coarse or brown bread, and for fermentation for whisky. It can be raised on poor, sandy soil.

CORN has its seeds attached to a central core or cob, wrapped in broad, thick husks, a part of its flowers hanging in a tassel, and others forming the ear. The grains are in eight or ten regular rows, and surrounded by the silk, the stems of the pistils very greatly lengthened.

BUCKWHEAT does not grow like the grains, but, being very like them in its seeds, is associated with them. It has white, sweet flowers, much visited by bees, and when in blossom is very pretty.

BEECHNUT.

CHESTNUT.

How do nuts differ from other kinds of fruit? Describe such as you know best.

Nuts.

TEACHERS' NOTES.

The Nuts are the hardest of the fruits. They are found growing on bushes or trees. What we call nuts are not always properly so classified.

The Peanut, or Ground-Nut, grows in pods, which are underground tubers. They are best when roasted or boiled. Oil is obtained from them.

The Chestnut is a very pretty study. It grows upon one of the noblest of our forest trees, quite out of the reach of ordinary harm, yet it is so carefully protected that there is little danger of its being disturbed or injured till it is fully ripe, when at the first frost its husk or burr opens and it falls out; or, later, husk and all may fall together.

The outside of the burr is thickly set with prickly spines, but its inner surface is soft as velvet. The two or sometimes three chestnuts are laid together at their flat sides, and their round ones fit into depressions in the burr like choice jewels in a velvet case. The nut itself has a smooth, brown skin. It is roasted or boiled, but can be eaten raw.

The Hickory-Nut, or shag-bark, is a good type of the nuts. Its meat has two parts fitted into grooves in the shell, which though thin is hard. This is covered by an outer husk, which divides on ripening into four sections, like flower-leaves.

The nut is sweet and rich.

The tree is tall, with long, drooping leaves in clusters.

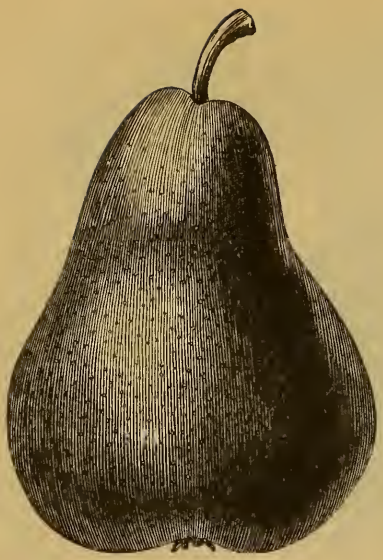
Beechnuts grow on a very beautiful tree. They are the small, sweet, three-sided nuts which we crack with our teeth.

The Almond, usually numbered with the nuts, grows like the peach in many respects, only that when ripened the outer pulp dries and is useless, and the *kernel of the stone* is used.

The Bitter Almond, one of the varieties, tastes like the kernel of a peach-stone.

Acorns, the fruit of the oak, are "the squirrels' nuts." They are very beautiful in their forms—clusters of little, rough, scaly cups in all positions, holding long, rounded balls.

The Hazel-Nut grows on high bushes, and is liked by children in the sections where it grows.



PEAR.

QUINCE.

Describe an apple, pear, and quince. Tell how each grows, and what use is made of it.

The Apple, Pear, and Quince.

TEACHERS' NOTES.

The Apple brings us to the fruit of trees, and orchards are almost as common as gardens. The apple-tree is low-branching, rough barked, and often large.

The blossom is pink and white, sweet-scented, and of great beauty.

The varieties of apple are numerous, some ripening in early autumn or even summer, some late for winter use.

The colors are red, bright, and dull; plain and streaked; yellow, deep, and pale; russet-brown and golden; and green.

The general form is round, with a deep dimple at the stem, and the remaining dry leaves of the blossom opposite. Some varieties are lengthened between these two parts, and some shortened.

In flavor we have sour, sweet, mild, spicy, tart, and bright.

In pulp fine and coarse grain, juicy, dry, mellow, mealy, and crisp.

The seeds are wrapped in a stiff, husk-like sac, which is joined by tough threads to the eye and dimple, forming a core.

The Mango, in very hot countries, takes the place that the apple and peach do with us. It cuts like an apple, but has a stone.

The Pear is in general character like the apple. The form varies in the different varieties, some being much like the apple, and others greatly elongated, tapering from the middle toward the stem, and still others, like the one in the lesson, oval at the stem, then abruptly swelling toward the base.

The colors are russet, yellow, and brown, with cheeks of red.

The trees vary in the various kinds, and in different climates are differently trained. In cold, windy sections, they are sometimes trained by fastening to the sunny exposure of a building, and so made to look like vines.

The Quince grows upon a large shrub. It is a great ornament to a garden from its fair, golden fruit, which is also very pleasantly fragrant. The fruit is often called the "golden apple." It is hard and but little used, except for preserves and jelly.

CHERRY.

PEACH.

How do these fruits differ from those on the last page? Name other fruits that have stones.

Stone-Fruits.

TEACHERS' NOTES.

CHERRIES are the first to appear of the tree-fruits. They are smooth and round, and grow in small clusters on drooping stems. The colors are bright and pale red, deep red, or nearly black, according to the varieties. The pulp is soft and juicy, and bright, tart, or sweet in different kinds.

Within the pulp is a small round stone, which covers and holds the seed.

The blossoms in early spring are pure white in large clusters, and, coming in advance of the leaves, robe the tree like a bride in white. Not every blossom can be counted for a cherry, the clusters of which seldom contain more than three or four.

A wild black cherry is medicinal.

PLUMS are generally, in cultivated varieties, larger than cherries. They have a delicious pulp inclosed in a purple, green, or yellow smooth skin, and within it a smooth stone. Some of the purple and green gages are of melting sweetness, and in the localities where they can be grown are greatly prized. They do not bear transportation, decaying very soon after ripening.

THE PEACH is, taken for all in all, the most valued of the stone-fruits. It is the largest, in some of the species being equal in size to the average apple. No fruit is more beautiful. The velvety look given by the soft bloom, and the deep colors of the cheeks, shading from light to dark, make it a color-study for artists.

The bloom has a "flannel" feel that is not agreeable, so that most persons rub it from the skin, or peel the peach before eating it.

The pulp is white or deep yellow in the different kinds, and rich, sweet, and juicy—three elements which together realize one's idea of *luscious*.

The fibers go from the rough stone to the surface, in some varieties clinging to the roughnesses of the stone.

A line or crease around one side of the peach shows where it may be broken in two; it follows the line of the shell, which is in two parts more or less closely joined, but parting without difficulty.

COCOANUT.

FIG.

Describe the flavor of these and other imported fruits, and learn something of their growth.

Fruits of Hot Climates.

TEACHERS' NOTES.

The Cocoanut is the fruit of the cocoa-palm, a very tall, slender tree, without a branch.

The foliage is a tuft of leaves eighteen or twenty feet long, under which are the clusters of fruit.

There are from five to fifteen nuts in the cluster; and clusters are brought to perfection at intervals of six weeks—a single tree bearing from eighty to one hundred fruits in a season.

Every part of the tree is turned to account: the leaves for thatching, for paper, fans, hats, etc.; the young wood, when the soft center is removed, for water-pipes; the fibers of the husk for rope; and the fruit for its milk, pulp, and oil.

The Date, the fruit of the date-palm, is the chief subsistence of the native people where it grows. It is borne in a great many large clusters, and when ripe is very luscious. The trees begin to bear when six or seven years old, and continue for much more than a person's lifetime, which, in a climate where hard work to obtain food would be a burden, is a great blessing.

The Fig grows upon a *low* tree, not over twenty feet high.

It is shaped somewhat like a pear, but the stem is so short that it can not droop.

The pulp is soft and very sweet.. The colors in different kinds are bluish-black, purple, red, green, yellow, and white.

Two crops a year are borne by the same tree. The fig-tree can be raised in cool climates, but it needs protection, and can mature but a single crop of inferior quality.

The Pineapple grows upon a low plant, whose very stiff leaves are almost stemless. From the center a stem rises a little way, bearing a cluster of purple flowers, which unite in becoming the single, cone-like fruit, whose scaly surface represents their outer flower-leaves thickened.

The Banana grows upon a tree three or four times the height of a man, with leaves drooping from its top to almost half its height. The fruit is oblong, fleshy, and covered with a smooth skin. The colors are deep red and pale yellow, and, as the fruits can be ripened apart from the tree, they are excellent for exportation.

STUDIES IN WORDS.

Introduction to Number Four.

A NICE discrimination in the use of words lies at the foundation of mental power. The ear that "trieth words" is an educated one; and the work of training, if slow, is sure.

Two kinds of instruction claim the teacher's care: First, to extend and clear the sphere of words already *in the vocabulary of the child;* and, second, to add new ones as symbols for ideas with which he either *has been* or *is now made* familiar.

All *terms*, that is, words having picture-power as distinct from *words of relation*, have a more or less clearly-marked territory of meaning, the extent of which may be measurably determined by their usage.

Something of this it comes within the child's province to know.

The dictionary refers things, as signified by words, to *classes*, and defines classes in yet more abstract words. It was not made for children, and it serves them but poorly. What is wanted is an *illustration* which shall picture anew such circumstances as gave rise to the word.

A man pursues a course which causes wrong, suffering, and loss to others. He is aware of the injury, and knows himself as the occasion, yet is entirely indifferent to all but his own ends. We call him a *hard* man. If "hard" must be explained, there can be no surer way, especially for a child, than to recount the circumstance which makes it appropriate. The narrow acceptation under which words are sometimes received by this method is no argument against it. The movement of mind is from the particular to the general, and the word will soon enough come to fit other people of similar nature.

It is not possible to mark out the path for such teaching. Other studies, incidental and local interests, largely affect its *subject-matter*, and the previous and present life of the children its *method*. The lessons of the book, especially those telling "what kind," are in its line, showing its direction though not its extent.

Object-lessons on qualities, if intelligently given, contribute materially to this culture.

For example: A teacher makes successive experiments illustrating the various forms of *burning*, as shown by light shavings and other *inflammable* materials; by phosphorus and some gases, dangerous from being so easily *ignited;* and by powder as *explosive.* Coal burning *slowly* and *strongly* and the insensible *rust* of iron illustrate added elements of the same idea. Over each form of burning is set the appropriate expression, and *combustion* is made light, with the meaning of all.

The analysis of such teaching shows *three*, or, at most, *four stages:*

First. *Clear showing of the* existence of the *quality* by natural tests.

Second. Variety of examples to *detach it* in thought *from the things* in which it resides.

Third. Exercise in the *use of the term*, and last, if at all, a *general definition.*

Again, a person by his acts calls attention to himself, and is made the subject of remark. Such epithets as bold, brave, courageous, daring, noble, etc., are applied, when *desperate* is the only one that belongs to him, as the teacher can show.

No class of children will be insensible to such help from their teachers, and no item of teaching is more interesting. Later studies in literature reap to the full, and all studies to an extent, its benefits.

An assortment of small spools of colored sewing-silks, or knots of worsted, with the miscellaneous collections for which they will become the nucleus, have power, through the addition of thought and language training, to elevate a child's nature as music does. *And twelve hours of teaching will suffice for it.*

Words are the current coin of communication between minds. They have all the value of other moneys, and their possession by one makes no other a loser. We can afford to make our pupils rich with them.

What kind?

We are to make collections of words answering the question at the head of the lesson. It is what grown people call making a vocabulary.

This lesson is upon TREES. Every kind of tree has something in which it differs from every other, and we call one an *oak*-tree, another an *elm*, and others *beech*, *birch*, etc.

Even of the same kind, no two are exactly alike. One may be *large*, *tall*, *high*, etc., another *small* and *low*. If a tree is much smaller than others of its kind and age, it is described as *dwarfed*.

Trees are *grand*, *stately*, and *noble*, and they are *blasted*, *stunted*, *withered*, and *unshapely*. A dead branch often makes a tree prettier in a picture, and we say it is *picturesque*.

Some kinds of trees are *bending*, *drooping*, *swaying*, and *graceful*, while others are *straight* and *strong*.

There are those that grow to their full height without a branch, and there are many that are *low-branching* or *broad-branching*.

For use while standing a tree may be an *ornamental*, a *shade*, or a *fruit tree*; it may be *valuable* or *worthless* to cut down.

At different times of year a tree may be *leafy*, *budding*, *blossoming*, *fruitful*, *full-fruited*, *bare*, or *barren*.

NOTE.

There are other words, but these will show you how to study the lessons that follow, and to write answers to the question WHAT KIND in each case.

There is no space left in the book for *writing* about trees, but you may describe a great many in spoken words, or in slate exercises. Read the lesson with the word tree after each italicized word; for example, A large tree. Next read two that may be used for the same tree, then three, and each time *think* the picture. Then make statements like the following:

"A young, thrifty shade-tree has been set in the place of one that was unshapely, blasted, and dying."

"The palm is a tall, straight, branchless tree." "There is a robin's nest in the low-branching, old apple-tree."

Think of all the different kinds of boys and girls that there might be, and find words to describe them in every particular.

1. Size, form, style of dress, health, and appearance in general.

2. Disposition, character, ways, and habits, as shown by feelings and acts. With a little help you may easily find a *hundred* words. Write as many as you have room for below.

Kinds of Children.

SUGGESTIONS TO TEACHERS.

Here are —— —— and —— side by side. Let us find words by which to describe the size and form of each.

How do they differ in complexion?

. . . . . .

I went, in the early spring, to visit a boy who had been ill for months. Tell me how you think he looked and what was his condition. He went into the country soon after, and a few days ago I saw him again and hardly knew him he was so changed. Tell me about him now.

. . . . . .

A poor boy comes to the door to beg; how does he look? what of his clothing?

Here is a picture of some boys and girls—a scrap-book collection of fashion-plates, old and new—what have you to say of their costumes?

. . . . . .

Picture striking instances of conduct, then ask what say you of the conduct and so of the boys or girls?

A boy who can —— —— —— is a —— boy.

The teacher fills the first ellipses.

Suppose yourself to be very tired, or busy, and a younger brother or sister claims your attention or care, and tell me how you *feel* about it.

If you conquer the feeling, and do as you are asked, what shall we say of you? and what if you do not?

Picture circumstances not agreeable; get expressions of their effect upon the feelings. Also the opposite circumstance of great joy or delight.

How does having or not having things that money will buy make difference between children?

How do their ways of using their possessions, large or small, show their characters? Quote fine selections in prose or poetry showing character, and observe the words used.

. . . . . .

The above suggestions and questions show only how the thought may be challenged. It is in the way of meeting it that the teacher does the real language-training. It is a place for the exercise of her clearest, best powers.

Begin by grouping a number of the words in the lists made in the last lesson, that are appropriate to a single person. Remember that while the same boy *may* be kind and thoughtful or careless and selfish under different circumstances, he is not both *at the same time.*

Describe particular boys and girls that you may know.

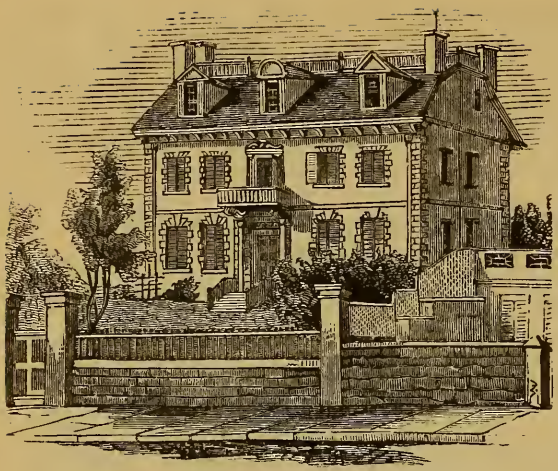
Examples: George Brown is a brave, honest, manly boy. My cousin Ned is a great, stout, clumsy, good-natured fellow, lazy and merry, but kind and true.

I have a dear little sister. She is pale, slender, and delicate, but she seems well and happy.

I do not like a sullen, sulky child, but I enjoy a roguish, jolly, noisy boy, if he is not cruel nor rude.

The girls at Miss Blank's school are polite, agreeable, lady-like, and kind.

Boys and Girls.



Of what kinds may a house be with respect—

1. To the material of which it is built?

2. To size, color, condition, etc.?

3. To the plan of the building?

4. To its situation or location?

5. To beauty and expense?

Kinds of Houses.

On this page write descriptions of particular houses, either real or imaginary. Your own home, or a house in your neighborhood that all the class know, will be a good study. Make an account of *one* which shall have something said upon each one of the five points of the last lesson. State what kind of a house you would like.

Example: I have in mind a house that I would like to own. It is a two-story, white, wooden house, with a Mansard roof and two bay windows. It is well located on high ground and very attractive, but not high-priced. I have not seen the inside, but am told that it is convenient and roomy.

A House.

What of his size and figure—his manners and appearance, disposition, character, and habits?

Find words, also, to tell his circumstances and position in life.

It will take every kind of man that you have known to make all the pictures.

Write the words on *this page*, and descriptions of particular people on the *next*.

A Man.

Try to imagine people that others have described.

"Fine, healthy, and jolly sailors, in their clean, white trousers and blue shirts."

. . . . . .

"The smith, a mighty man is he, with large and sinewy hands,
And the muscles of his brawny arms are strong as iron bands;
His hair is crisp and black and long, his face is like the tan;
He looks the whole world in the face, for he owes not any man."

. . . . . .

"I see the wealthy miller yet, his double chin, his portly size;
And who that knew him could forget the busy wrinkles round his eyes?"

Men that I have known.

Write words to describe the weather. Find one for every kind of day, of any season of the year.

Arrange the words in lines according to some plan, as for example:

1. What the thermometer tells about the days—
2. What an invalid says of some of them—
3. What the sailor, who has his vessel to guide—
4. What people, as they meet and make the customary remarks—
5. What boys and girls, who want to be out of doors, and are sometimes not well suited with the weather.

Kinds of Weather.

Describe a spring, a summer, an autumn, and a winter day.

What kind of weather makes a beautiful day—a depressing day—a stormy day—a drought?

What kind of a day was *yesterday*, or the day of last week, when some were kept at home?

Picture particular days when the events were regulated by the weather; also days when the weather was doubtful till late, or changing in the different parts of the day.

Tell some incident that caused you to remember or care about the weather.

Do you know lines of poetry describing weather?

Special Days.

Wise	Quiet	Noble	Curious	Anxious
Rash	Busy	Trusty	Cautious	Familiar
Rude	Jolly	Clumsy	Patient	Glorious
Firm	Gentle	Juicy	Earnest	Delicate
Plain	Merry	Rustic	Gloomy	Lonesome
Proud	Harsh	Brutal	Serious	Violent

Use each of the words above with whatever it will describe. Write in columns the phrases that you make, thinking the meaning.

Example: A wise man. Wise counsel. The wise word.

What?

SUGGESTIONS TO TEACHERS.

Get the word used, in each case, in as many ways as possible by the class before adding anything to their knowledge. It thus comes to be understood that it is when their wells are *dry* that deeper boring is resorted to.

If the word in question is one of wide meaning, classify its uses as given by pupils. There is a difference between *delicate* as belonging to color, flavor, and perfume, and *delicate* as used to describe the health of a person, the aptitudes of a plant, or the material or structure of an ornament. The children can appreciate this difference, and respond to natural questions about it. "What do I *mean* when I say that the vase is delicate?" "It will not bear rough treatment." "What, when I say the color of the dress is delicate blue?" "It is not a deep or dark blue." When the time is ripe for it, make place, if possible, for finding the *common ground* of meaning. The answers of the pupils will show their capacities. If there is doubt whether a word is used intelligently, question not about it but the thing it assumes to characterize; if another word is then found to be more appropriate, give it. It is thus that a word brings a companion, and the company is made larger.

Give some usages less familiar to the children; some among them will welcome them, and a class is somehow elevated by what its best members know.

"He paid me a delicate compliment." Is this use of the word like that in "delicate odor," or in "delicate vase"? What would be the *opposite* of delicate in case of the compliment? Tell what the compliment was, and show wherein its delicacy consisted.

All words and usages must *grow into* and afterward *in* the mind; and the teacher's help must be given *delicately!*

Another use of the words is by combination for picture-making. For example: Which might describe *food?* which a *house?* a *person?* a *day?* a *sunset?*

Record in the books such usages as it may be wise to recall for purposes of review. It is not intended that all the work shall be *written*, nor that any considerable part of the written work shall be *preserved in the books.* One or two examples of the best work will recall the method of all, and facilitate oral reviews.

A taste	Way	Room	Affair	Appetite
An odor	Time	Nurse	Brother	Companion
A sound	Year	Idea	Thought	Material
A feeling	Dress	House	Neighbor	Carriage
A pain	Fire	Walk	Country	Accident
A life	City	Garden	Voyage	Face

Answer the question "*What kind*" of each thing named, and answer it in a number of ways; then unite two or three answers into one.

Example: A long, winding way. A warm, bright fire.

What kind?

A bright spring day . . . a happy, proud robin . . . pretty blue eggs . . . neat, little brown nest.

Cruel boy . . . broken branch . . . ruined nest, broken eggs.

Wild, fluttering robin . . . frightened boy, torn jacket . . . sad, grieved mother, sorry boy.

These fragments joined, like beads upon a string, suggest a story.

Try to unite two or three of such as you made in the last lesson, then go on, and you can outline stories of boys and girls that will be interesting. Perhaps you can recall in this form stories that you have read.

Skeleton Stories.

Name the colors seen in the rainbow, or in sunlight falling through a prism of glass.

Write these with *the varieties of each*, beginning with *tints* or light colors, and ending with *shades* or dark ones, and the *hues* which are made by blending colors or tingeing one with another. Name the varieties of black, white, brown, and drab.

Make a collection of bits of silk, worsted, paper, etc., to illustrate the colors, and try at this time to fix in your mind each color with its name, that you may afterward be able to describe, in this respect, the beautiful things you may see.

Colors.

Write the names of colors seen in the sky at sunset, those in the woods in autumn, in the sea, and those that might be used in furnishing and decorating a room.

Describe special flowers, fruits, gems, etc., with respect to their coloring.

Name colors that harmonize with each other, and others that hurt each other if placed side by side. Learn something of the way so many varieties are made in paints and dyeing materials.

Try experiments with your paint boxes, and write the results.

Colors.

The most of the lessons have been answers to the questions "What kind?" and "What color?" This one asks "How many?"

For want of a variety of expressions, children are apt to use very frequently the few that come most easily to mind.

Make statements, using appropriately the following, and see if you can add to the number:

A good many . . . a few . . . several . . . many . . . not any . . . none at all . . . a number . . . all, a lot, ever so many . . . a dozen . . . pair . . . couple . . . brood . . . flock . . . shoal . . . swarm . . . school.

How many?

This lesson is an amusement or game. The teacher asks, "How often?" and the scholars answer in turn with some statement, as for example: "I take a music-lesson *twice a week*"; "I go *often* to the seashore." If any one has no answer, he says, "I do not know"; and some one, either pupil or teacher, asks a question, such as, "*Don't* you know how often *the clock strikes?*" to which he must answer in a statement.

By taking care, a great variety of answers can be found. Let the part of the answer that tells "how often" be written, and, each time these expressions are used in review, let *new statements* be made.

How often?

Everything that happens has some particular *time*, and, in telling the story of it, that is an item of interest.

One of the ways of marking time is in its connection with the present, and we say *now*, *to-day*, *yesterday*, or *next week*.

Another is by the almanac, or the seasons, as, "On the 10th of August," or "In the spring of 1876."

Still another is in relation to one's own life, as, "When I was about five years old."

You may find *a great many*, and they will suggest incidents, either true or imaginary, to relate.

When?

It is not always desirable to tell the time exactly, and some of our best stories begin with "Once," or "Once upon a time," "Long ago," etc.

Suppose your mother to be very much occupied, and there comes a call for her, what may she answer?

If you have some promised favor in mind, and ask *when* it is to be granted, what may be the response?

Collect as many expressions that mark time as you can find, and write the best of them in the page below. Make any one that is new to you your own by using it in your talks when at play.

When?

We must also learn ways of locating or *placing* the events we talk about. It adds greatly to the interest of any new thing to know where it occurred. If some one should say, "In a house not far from here," you would wait with interest for what might follow.

If you are telling a true story, name the actual place; if you are making one, you may name a place in some connection with your home, or some place you have visited or had some knowledge of.

Or it may be a place you *describe*, but do not name. Observe, in the books you read, how the place is indicated.

Where?

Several of the expressions gathered may be used in the same story, especially such as tell time and place. Answer the questions *when* and *where*, and you have a story half made, for "Well begun is half done." In the next book you are to find stories in pictures again, and the work you have done here will help you.

Example: "Once, when I was very young, and was visiting at my uncle's in Stowe, Vermont——" Could you not go on and make a story?

There is not room for long stories on this last page, but you may make three or four different *beginnings*.

When and where?

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